A dictionary of medicine, designed for popular use / [Alexander Macaulay].

Contributors

Macaulay, Alexander, 1783-1868.

Publication/Creation

Edinburgh : A. & C. Black, etc., [1840?]

Persistent URL

https://wellcomecollection.org/works/wmzf57gb

License and attribution

This work has been identified as being free of known restrictions under copyright law, including all related and neighbouring rights and is being made available under the Creative Commons, Public Domain Mark.

You can copy, modify, distribute and perform the work, even for commercial purposes, without asking permission.

wellcome collection

Wellcome Collection
183 Euston Road
London NW1 2BE UK
T +44 (0)20 7611 8722
E library@wellcomecollection.org
https://wellcomecollection.org

FOLTHORP,
North Street
BRIGHTON.

34575/3
Access No. 36610
Class. 610.3
Loc.

Bath Public Reference Library.

DISCARDED

Presented by—

Miss Hewitt

5752-28

Digitized by the Internet Archive
in 2018 with funding from
Wellcome Library

https://archive.org/details/b29324075

A

DICTIONARY

OF

MEDICINE,

DESIGNED FOR POPULAR USE.

CONTAINING

AN ACCOUNT OF DISEASES AND THEIR TREATMENT,

INCLUDING THOSE MOST FREQUENT IN WARM CLIMATES:

WITH DIRECTIONS

FOR ADMINISTERING THE VARIOUS SUBSTANCES USED AS MEDICINES;

THE REGULATION OF REGIMEN AND DIET;

AND,

THE MANAGEMENT OF THE DISEASES OF WOMEN AND CHILDREN.

By ALEXANDER MACAULAY, M.D.,

FELLOW OF THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH, AND PHYSICIAN ACCOUCHEUR TO THE EDINBURGH NEW TOWN DISPENSARY.

EIGHTH EDITION.

EDINBURGH: ADAM & CHARLES BLACK.

LONDON: LONGMAN, BROWN, GREEN, & LONGMANS.

95400

WELLCOME
HISTORICAL
MEDICAL
LIBRARY

TO

JOHN ABERCROMBIE, M. D.

THIS WORK IS INSCRIBED,

BY THE AUTHOR,

WITH SINCERE RESPECT FOR HIS VIRTUES IN PRIVATE LIFE;

AND FOR HIS SUCCESSFUL EXERTIONS

IN

IMPROVING PATHOLOGY

AND

THE PRACTICE OF PHYSIC.

PREFACE.

THE object of this Work is to present, in a popular and accessible form, some of the more useful and practical parts of medical science; not with the intention of making every man his own physician, but of giving such a plain and intelligible account of diseases and their treatment, as may convey some information to the general reader. Many persons, who would never think of practising either on themselves or others, may be desirous to have some notion of the phenomena of disease, and to know the symptoms which indicate danger; and if such were to apply to our regular and scientific treatises, they would find themselves totally bewildered amidst a multitude of terms altogether new to them, and amidst reasonings from data which they had never heard of.

The deviations from health which occur in the early periods of life are so numerous, that if a practitioner were called upon to treat them all, he must be almost a daily visitant in the nursery; and sensible and attentive parents are anxious to know what ailments or symptoms occurring in infancy, may be trusted to a little simple medicine and the regulation of the diet, and what are unsafe to be treated except by a medical attendant.

There are many situations where no practitioner is at hand; and where, on the occurrence of accident or disease, the treatment of the sufferer must, in the first instance, be directed by the good sense and kindness of his neighbours. Such situations are to be met with in thinly-peopled districts, in retired villages, in foreign settlements, and commercial outposts; where the first who are asked to give advice to their dependants or companions, will be the clergyman or the landlord, the supercargo or the shipmaster. To all these, some knowledge of diseases and their treatment, will prove a valuable acquisition.

To render the Work useful to such persons, I have been as sparing as possible of technical terms; and if any words or phrases sometimes occur not sufficiently adapted for common readers, they will generally be found explained in their alphabetical order. By adopting this arrangement, I have not only rendered the Work easily consulted on any disease, medicine, or circumstance of diet and regimen, but have been enabled occasionally to devote an article to some symptom deserving of particular consideration, though it could not with propriety have so much space allotted to it in the description of a disease.

The uses and doses of the more common medicines have been specified; the properties of a great variety of aliments and drinks have been carefully stated, and such remarks have been made as may tend to show the propriety, in most cases, of using them or abstaining from them. Much attention has been paid to the various diseases and conditions peculiar to the female constitution; and particular directions have been given for the management and preservation of the health of women; as well as for the care of infants and children, so long as they are principally under the superintendence of their mothers.

Besides the topics more immediately connected with the practice of physic, diet, and regimen, I have inserted some account of the principal functions of the animal economy, as the circulation of the blood, respiration, digestion, &c. I have also stated fairly, as I hope, the advantages and disadvantages of wine, spirits, tea, coffee, tobacco, and other articles of luxury. I have added in an Appendix, a list of medicines, both for adults and children, with the mode of administering them; and have given such directions and cautions as will make them in general safe, as well as useful.

The nature of this Work, and the persons for whom it is intended, render it impossible to go to any great minuteness in its details; and may make the style on some occasions appear rather concise and peremptory.

But the importance of any subject is not always to be estimated by the length of the discussion concerning it. The symptoms and treatment of an insignificant eruption on the skin, may take a great many more words, than what will be necessary to communicate all that is useful for the general reader to know, about rupture of the bowels or inflammation of the lungs.

Without intending any invidious comparison, I may be allowed to say, that some other works of this description are rendered the worse by their copiousness, and are rather calculated to puzzle than inform the unlearned reader; as they do not simply and shortly state what appears to be the most proper practice, but accumulate in an undigested mass all that has ever been invented or proposed for the cure of any disease.

In an age like this, when the most abstruse parts of natural philosophy and economical science are brought within

the reach of all classes of men, it can hardly be necessary to make an apology for treating of medicine in a popular style; as it is a subject in which every individual is personally interested, and on which, great multitudes think themselves qualified to give an opinion. Medicine has always been a favourite pursuit with extra-professional persons, who have not scrupled both to teach and to practise it; from the empirical nostrums of the ancient priesthood, down to the no less oracular dictates of the skilful and experienced old women of modern times. Such, in Lord Bacon's opinion, have been the most formidable rivals of the regular physicians; who have been almost tempted in despair to conclude, that it is a matter of little moment, whether they attain perfection or mediocrity in their art.

That sagacious and universal observer assigns this as the reason, though not the vindication, why there are to be found among physicians, excellent poets, orators, critics, and antiquarians; more profoundly skilled in those pursuits than in their own science. In all professions, there are, no doubt, idlers and theorists; and of such, Medicine has had its full share: but, without exposing to profane view the lateness of our reformation, we venture to say, that we are now in the right way of investigation; and that, by an accurate observation of disease, and of the effect of substances taken into the body, whether in health or sickness; by a careful cultivation of morbid anatomy, and by an improved pathology resulting from the combined diligence and good sense of many enlightened minds, the attentive practitioner is in possession of a stock of sound and useful knowledge, which will justify the confidence reposed in him, and render it disgraceful for any one above the lowest vulgar and ignorant, to suffer the presumptuous impostor to come in competition with him.

I have endeavoured to show, that the practice of physic is by no means so simple and easy a business as is generally imagined; and I have given such an account of the various subjects treated, as may tend to correct some of the absurd theory and dangerous practice, so common among the uneducated part of mankind. One of their most frequent mistakes with regard to medicine, is the belief, that what has done good in one case of disease, is to be equally beneficial when similar symptoms happen in another. When an eminent physician has been called in, and has prescribed a medicine which has answered the purpose intended, and to all appearance has cured the patient, nothing is more common than for the precious recipe to be kept, and lent to a long series of afflicted friends. Such benevolent quackery proceeds on the supposition, that a disease called by the same name has the same symptoms in every case; and that a drug produces its effects as infallibly as an operation of mechanics or a process of chemistry. It reduces medicine to the simplicity so much boasted by the mathematical physicians of the seventeenth century, who thought they had in many cases solved the problem, A disease being given, to find the remedy. But there is a preliminary problem equally necessary and difficult, that should first be solved: A patient being given, to ascertain his disease.

All makers of Dictionaries, even Johnson himself, borrow freely from their predecessors. I have been considerably indebted to the judicious work of Dr. PARR of Exeter; and when I have extracted from him or from others, important hints or information, I have generally been careful to acknowledge the source from whence I derived them. In a work of such variety and extent, many different authors have necessarily been consulted; but, although not making

any pretensions to originality, I may be allowed to state, that what I have written on the common diseases and remedies of our own country, and on some of those of tropical climates, is conformable to my own experience.

I shall be highly gratified if my humble performance shall convey any interesting information on medical subjects to the general reader, or useful hints to parents in the management of their children; and I hope the Profession will look with indulgence on a work, which details practical truths in plain language; but in which, if I have executed my own intention, I have advanced nothing inconsistent with the principles of true science.

EDINBURGH, 20*th March*, 1828.

ADVERTISEMENT

TO THE

SECOND EDITION.

THE Author acknowledges, with gratitude, the favourable manner in which his Book has been received; and has endeavoured to render this second edition yet more worthy of the public approbation. He has carefully revised the whole, made many corrections and additions, and considerable improvements on the arrangement of various articles.

Since the first edition of this work, several medical publications have appeared, containing matter calculated not only to inform the Profession, but to interest the general reader. One of the most distinguished of these is a work of Dr. Abercrombie on the Intellectual Powers, from which copious instructive extracts are made on Insanity, Dreaming, Sleep-walking, &c. We may also mention that we have been greatly indebted to an elaborate treatise on Poisons by Professor Christison; and to a valuable work on Climate by Dr. Clark.

The following articles, read consecutively, may be considered as forming distinct treatises:

On Diet, Regimen, and the Means of Preserving the Health:—Health, Air, Heat, Cold, Night-Air, Habit, Exercise, Regimen, Hunger, Thirst, Costiveness, Training, Aliments, Diet, Animal Food, Vegetable Diet, Digestion; Meals, Breakfast, Dinner, Supper; Cookery, Condiments, Bread, Water, Fish, Fruits, Pastry; Malt Liquors, Alcohol, Ardent Spirits, Wine; Tea, Coffee, Tobacco; Clothing, Perspiration, Sleep, Cleanliness.

Of Children, their Management and Diseases:—Infants, Children, Gum, Inward Fits, Weaning, Teething, Dwining, or Marasmus, Fevers of Children; Scarlet Fever, Measles, Small-Pox, Cow-Pox, Mumps, Croup, Hooping-Cough, Head, Water in; Convulsion-Fits, Dance of St. Vitus, Ringworm, Scalled Head; Ears, sore; Rickets, Scrofula, Hip-Disease, Knee-Joint, White Swelling.

Of Women, and the Peculiarities incident to the Female Sex:—Female Complaints, Monthly Discharge, Chlorosis (Green Sickness), Womb, Pregnancy, Longings, Fœtus, Abortion, Labour, After-

birth, Delivery, Flooding, Lochia, (Cleansings); Miliary Fever, Milk Fever, Breasts; Puerperal, or Child-bed Fever, White Leg, Nipples, Nurses and Nursing, Hysterics, Cancer.

Of Fevers and Inflammatory Complaints:—Contagion, Malaria, Fumigation, Ague, Fever, Plague, Yellow Fever, Hectic Fever, Inflammation; Lungs, Inflammation of; Rheumatism, Rose.

Affections of the Head and Nervous System:—Head, Headach, Giddiness, Apoplexy, Palsy, Delirium, Sleep and Sleep-walking, Dreaming, Insanity, Nervous Hypochondria; Brain, Compression and Concussion of; Epilepsy.

Breast Complaints:—Chest, Water in; Lungs, Angina Pectoris, Asthma, Catarrh or a Cold, Influenza, Spitting of Blood, Consumption, Cough, Expectorants.

Disorders of the Bowels, &c.—Bowels, Inflammation of; Peritonitis, Iliac Passion, Ruptures, Dry Bellyach, Colic, Cholera Morbus, Dysentery.

Stomach Complaints:—Alimentary Canal, Aliment, Diet, Animal Food, Vegetable Diet, Digestion, Stomach Complaints, Stomach, Inflammation of; Ulceration of; Acidity, Heartburn, Sick Headach, Nausea, Sickness, Bile, Bitters, Costiveness.

April, 1831.

BERLIN BILLS OF MORTALITY FOR 1829.

The following Table, which could not be conveniently inserted in the body of the Work, is one of much interest, as containing part of the statistics of a great city in the temperate regions of Europe, where the usual rate of increase and mortality is not likely to be disturbed by any peculiarity of climate or situation, or by the temporary stimulus to population in a young and recently colonized country. ADDISON makes this the topic of one of those delightful essays, (*Spectator*, 289.) by which he brought philosophy out of closets and libraries, schools and colleges, to dwell in clubs and assemblies, at tea-tables and in coffee-houses. With his usual felicity and genuine English style, he says, "A bill of mortality is, in my opinion, an unanswerable argument for a Providence. How can we, without supposing ourselves under the constant care of a Supreme Being, give any possible account for that nice proportion which we find in every great city between the deaths and births of its inhabitants, and between the number of males and that of females brought into the world? What else could adjust in so exact a manner the recruits of every nation to its losses, and divide those new sup-

plies of people into such equal bodies of both sexes? Chance could never hold the balance with so steady a hand. Were we not counted out by an intelligent supervisor, we should sometimes be overcharged with multitudes, and at others waste away into a desert; we should be sometimes a *populus virorum*, as Florus elegantly expresses it, a generation of males; and at others a species of women."

In Berlin, which, according to Malte-Brun, contains 192,000 inhabitants, the *Births* in 1829 were 8450, of which 4287 were boys, 4163 girls; 649 boys and 666 girls born out of wedlock, or a proportion of 1 to 6⅔; 228 boys and 179 girls born prematurely, or still-born, or a proportion of 1 to 20 of the total births, and (1 to 12 out of wedlock,)—94 cases of twins, and 1 case of three at a birth. The *Marriages* were 1988. The *Deaths* were 6884; of which 3721 were males, 3163 females; and 3213 under, 3671 above ten years of age. The following table presents a view of the number of deaths at different ages:—

	Males.	Females.	Total.		Males.	Females.	Total.
1st year,	1064	926	1990	From 20 to 30,	333	195	528
2d do.	292	246	538	— 30 — 40,	311	197	508
3d do.	138	130	268	— 40 — 50,	353	211	564
4th do.	66	86	152	— 50 — 60,	327	245	572
5th do.	43	40	83	— 60 — 70,	321	282	603
From 5 to 10,	99	83	182	— 70 — 80,	208	294	502
— 10 — 15,	30	30	60	— 80 — 90,	74	125	199
— 15 — 20,	53	53	106	— 90 —100,	9	18	27

Above 100, 2 women.

The next table is a very important one, containing the names of the diseases in every case of death, the males and females being distinguished, and also the cases below and above the tenth year of life.

	Adults.		Children.		Total.
	Males.	Females.	Males.	Females.	
Weakness of old age,	218	388	—	—	606
Weakness at birth,	—	—	120	112	232
Still & premature births,	—	—	228	179	407
Teething, - -	—	—	89	70	159
Locked jaw, - -	9	—	9	8	26
Spasm of stomach, -	1	4	—	—	5
Convulsions, - -	7	9	412	381	809
Scrofula, - -	3	2	13	14	32
Fungous growths,	1	—	10	8	19
Water in the head, -	1	—	80	53	134
Catarrh and chincough,	—	—	15	18	33
Small-pox, - -	18	7	2	4	31
Measles, - -	—	—	5	3	8
Red measles, -	—	—	4	2	6
Scarlatina, - -	7	4	33	30	74
Croup, - - -	1	—	17	21	39
Rose, (erysipelas) -	1	2	1	3	7
Inflammation, brain,	21	10	64	50	145
——— lungs, - -	35	44	64	50	193
——— belly, - -	15	29	10	4	58
——— liver, - -	5	9	—	1	15
——— intestines, -	3	3	—	—	6
——— larynx, -	1	4	12	1	21
——— stomach, -	2	2	1	—	5
——— heart, - -	2	1	1	—	4
——— bladder, -	1	—	—	—	1
——— womb, -	—	2	—	—	2
——— chest,	4	4	6	4	18

	Adults.		Children.		Total.
	Males.	Females.	Males.	Females.	
Inflammatory fever,	6	2	5	4	17
Nervous —— -	108	61	12	10	119
Bilious —— -	5	2	—	1	8
Mucous —— -	4	3	2	1	10
Putrid & spotted ——	1	1	—	—	2
Intermittent —— -	3	3	—	2	8
Puerperal —— -	—	7	—	—	7
Slow —— -	313	282	288	290	1173
Consumption, -	407	175	2	1	585
Phthisis laryngea, -	19	22	—	—	41
Diseased mesenteric glands,	9	8	—	2	19
Chronic hepatitis, -	9	8	1	—	18
Ulceration, intestine,	5	2	—	—	7
Catarrh of bladder, -	1	—	—	—	1
Dropsy, - -	134	107	23	19	283
Water in the chest,	79	41	6	9	135
Jaundice, - -	2	1	4	2	9
Looseness, - -	8	1	12	17	38
Cholera, - - -	2	2	11	4	19
Hæmorrhage, - -	14	11	—	2	27
Vomiting of blood, -	13	3	1	—	17
Apoplexy, - -	308	205	101	85	699
Drunkenness, - -	2	—	—	—	2
Blue disease, - -	—	1	—	2	3
Diseased urethra, -	1	—	—	—	1
Childbed, - -	—	6	—	—	6
Organic disease of abdomen,	4	3	1	—	8
Do. of heart, - -	12	17	1	1	31
Insanity, - -	2	3	—	—	5
Rupture, - -	3	10	—	—	13
Caries, - -	3	2	4	—	9
Cancer, - -	2	1	1	—	4
Cancer of womb, -	—	38	—	—	38
—— breast, -	—	4	—	—	4
—— stomach, -	1	—	—	—	1
Gangrene, - -	6	7	—	1	14
Asthma & breast complaints,	12	15	4	11	42
Emphysema, - -	1	—	—	—	1
Gout, - -	3	3	—	—	6
Stone, - -	1	1	—	—	2
Obstructed intestines,	1	2	—	—	3
Indurated cellular tissue,	—	—	3	3	6
Tabes dorsalis, (wasting)	2	1	2	1	6
Surgical operations, -	—	1	—	—	1
Softening of stomach, -	—	—	8	6	14
Scirrhus of ditto, -	7	4	1	—	12
Excessive discharge,	—	2	—	—	2
Suicide, - -	39	13	—	—	52
Accidents, - -	68	21	9	6	104
Unascertained diseases,	44	27	4	10	85
Total, - -	2020	1653	1702	1509	6884

POPULAR

MEDICAL DICTIONARY.

ABDOMEN.

ABDOMEN. The name given by anatomists to the cavity of the belly. It contains many important organs, as those of digestion, viz. the stomach and bowels, with all their appendages, such as the mesentery and its glands, through which the chyle, elaborated from the food, must pass, before it conveys the supplies of nourishment to the body; also the liver, the *pancreas* or sweetbread, the spleen, the kidneys, and various large blood-vessels. It is bounded by bones and muscles, and is separated from the cavity of the chest by the diaphragm or midriff. Its lower part, though not so conspicuously marked off by any peculiar division, has an appropriate name, the *pelvis* or basin, and is generally described as a distinct cavity. In this lower part are contained, in men, the urinary bladder, the spermatic vessels, and the extremity of the great gut; and in women, besides the bladder and gut, the womb, and parts belonging to it.

It will be easily imagined, that from the variety and number of the parts contained in the abdomen, and connected with it, that cavity and its boundaries must be the seat of many diseases, and the subject of various surgical operations. Its muscular parts are, like those of other similar textures, liable to inflammation, terminating in an abscess, or to that sort of it called rheumatism. The apertures which transmit organs from the inner parts may be enlarged so as to allow the bowels to protrude, and form herniæ, or what are commonly called ruptures; or the same disease may be produced from sudden efforts or external injury forcing the bowels through the various openings. The skin and the muscular coverings are often exceedingly distended by dropsical swellings, by corpulency, by enlarged ovaries, and by pregnancy. After this last state, they commonly regain the greater portion of their elasticity, but sometimes great relaxation remains ever afterwards; and requires bandages and artificial supports. The abdomen sometimes requires to be pierced by the surgeon in order to evacuate dropsical or other fluids. This operation, from a very obvious allusion, is called *tapping*. The diseases of the different organs contained within the abdomen, and the method of cure, will be found under their respective names. *See* STOMACH, LIVER, BOWELS, RUPTURE, DROPSY, &c. &c.

It is always proper to keep up sufficient warmth about the abdomen; and while the feet, the arms and neck are not to be neglected, no considerations of elegance or fashion should induce women to deprive the abdomen of its due covering and support. It is preposterous to lavish attention on furs at the borders and outside of the dress, where they can be of no use, while the natural heat is allowed to disperse where nature points out that it should be carefully preserved. Flannels and fleecy hosiery should be worn next the skin.

ABORTION, or MISCARRIAGE, *(Abortus.)* The separation of the offspring from the mother, at any period before the seventh month; between which period and the full time, the same event is called premature labour.

Symptoms. Abortion may be described as consisting of two stages, the separation of the embryo from the inner surface of the womb, and its being thrown out of the body by the action of the womb and other expelling powers. For a longer or shorter period before abortion takes place, there is pain in the lower part of the belly or about the back and loins, which gives warning of something wrong being about to happen. Then there is a discharge of blood from the external parts, sometimes slight, at other times profuse and alarming; accompanied or succeeded by sharp pains in the back, the loins, and the lower part of the belly, not constant, but intermitting like those of regular labour. Often there is vomiting, sickness, or pains of the bowels, and headach; and from the quantity of blood lost, fainting fits frequently occur, and there is commonly a sense of weakness, much greater than can be accounted for by the copiousness of the discharge. If, by the efforts of nature or the assistance of art, these symptoms abate or cease, the embryo is retained and continues to grow; but, in other cases, the discharge of blood continues, and the signs of approaching expulsion of the contents of the womb become more evident. Regular pains ensue, there is a feeling of bearing down, with a desire to make water, and at last, the fœtus comes off, either surrounded with its membranes, if the whole *ovum* be small; or the membranes break, the waters are discharged, and the fœtus comes away, leaving the after-birth behind. If this be long retained, the bleeding and other troublesome symptoms continue, with the additional ones of fetid discharge and putrescency.

Causes. 1. Abortion may be caused by external violence, as kicks or blows, a fall, or violent action, as dancing, riding, jumping, or much walking. Women in the state of pregnancy should avoid many of the domestic operations so proper at other times for good housewives to engage in. As our aim is to be practically useful, we venture, at the risk of exciting a smile, to mention some exertions that ought to be avoided, viz. hanging up curtains, bed-making, washing, pushing in a drawer with the foot, careless walking up or down a stair. 2. Straining of the body, as from coughing. 3. Costiveness. 4. Irritation of the neighbouring parts, as from severe purging, falling down of the gut, or piles. 5. Any sudden or strong emotion of the mind, as fear, joy, surprise. 6. The pulling of a tooth has been known to produce a miscarriage; and though toothach is occasionally very troublesome to women in the pregnant state, the operation of drawing teeth should, if possible, be avoided at that time. 7. Women marrying when rather advanced in life, are apt to miscarry. It would be hazardous to name any particular age at which it is too late to marry, but the general observation is worth attending to. 8. Constitutional debility from large evacuations as bleeding, or purging; or from disease, as dropsy, fever, small-pox. 9. A state the very opposite of this, is sometimes the cause of abortion, viz. a robust and vigorous habit, with great fulness of blood, and activity of the vascular system. 10. The death of the child.

Treatment. Miscarriage is always an undesirable occurrence, and is to be prevented by all proper means, as a single miscarriage may irretrievably injure the constitution, or give rise to continual repetitions of the accident. Unless we have reason to believe that the child is dead, it is desirable that miscarriage should be prevented, and that the woman should go on to the full time, if possible; but if the motion of the child should cease, if the breasts of the mother should become soft after disease or great fatigue, and signs of miscarriage come on, it would be improper to endeavour to prevent the embryo coming away; and we must direct our

efforts to relieve any urgent symptoms, and do what we can to conduct the patient safely through the process.

When we have determined to attempt checking the discharge and preventing the consequent expulsion, the patient must cease from all exertion in walking, or even sitting upright, and must lie along on a bed or sofa; all heating food or liquors must be avoided; whatever is taken should be rather cool, and cold applications must be made to the back, the loins, and neighbouring parts. A lotion useful for this purpose, and generally easy to be had, is one part of vinegar to two or three parts of cold water; cloths or towels dipped in this are to be applied as directed above. The fainting which so often occurs, requires to be relieved by a very moderate use of cordials, as a little wine and water, or even brandy and water; but in this, much caution is required, lest feverishness or inflammatory symptoms be brought on, which in a weakened frame are apt to occur, from causes too slight to have the same effect in a healthy one.

As abortion sometimes takes place from too great fulness of blood, and from that state of the constitution well known by the name of high health, it is right in such cases to employ bleeding, to order a cooling diet, as light puddings, preparations of milk, or boiled vegetables; and to give gentle laxatives, as castor oil, senna, small doses of purging salts, magnesia and rhubarb. If, under such treatment, the discharge from the womb stops, if the pains cease, and the sickness, headach, and constitutional symptoms are relieved, we may hope that the woman will not part with her offspring, but bring it to the full time. She must make up her mind to be in the reclining posture for some time, and must consider herself as liable to be affected by the same symptoms and the same danger if she uses the smallest liberty with herself.

If the discharge, however, still continues, and if there is little likelihood of the pregnancy going on, every thing must be done to assist the woman in the safe completion of the process. We must introduce a soft cloth dipped in oil, into the birth, so as to fill the lower part of it. By this means, the blood has time to form into clots, and the contraction of the womb throws down the embryo along with them. We should not hastily use any force by the hand to bring it away; but the time when this may be done is to be left to the judgment of the medical person in attendance. As the after-birth in the early months bears a larger proportion to the contents of the womb than it does in the later months, it is often retained long after the child is expelled; but it must be remembered, that the womb will not contract till every thing is out of it, and therefore the bleeding will continue till the after-birth is off. It may happen to lie partly out of the womb, and if so, the practitioner is to attempt gently to remove it by the hand; but if it be wholly in the cavity of the womb, its expulsion is to be promoted by clysters of gruel, with the addition of salts, or with senna, or even a little of the tincture of aloes.

Patients should be careful not to throw away any thing discharged, on the supposition that they know what it is, but should uniformly show every clot to the practitioner, that he may be enabled to distinguish with certainty whether the child and after-birth are thrown off. When the womb is emptied, the belly is to be tied up with a binder, as after delivery at the full time; the same rest and quiet is to be ordered; the diet must be light and nourishing; heating food, all spirituous and malt liquors, are to be avoided, till the practitioner judges it proper to allow sulphuric acid, bark, and wine, or porter, to assist in recruiting the strength, which in the event of abortion is generally so greatly exhausted.

A very strong reason for enjoining rest and quietness after a miscarriage is this, that when twins or three children have been conceived, the embryo of one of them may be thrown off, and the other

may be carried to the full time. Any premature exertion might, therefore, endanger the life of more than one child. When the woman is in some degree recruited, her recovery is to be completed by moderate exercise, by proper diet, by the use of the cold bath or sea-bathing, and by taking stomachic medicines, as the bark, and wine, preparations of iron, or the elixir of vitriol. Few incidents have so pernicious an effect as a miscarriage on certain constitutions; sometimes the health is irreparably injured, or a habit is begun which prevents the woman from ever carrying a child to the full time. In every future pregnancy particular caution is requisite, especially at the period when the miscarriage formerly happened, which is very generally between the eighth and twelfth week. For a considerable time before and after this, the woman should lie in the reclining posture, should attend to keeping the bowels easy by such mild laxatives as have been already mentioned; and if too full, should lose a little blood.

Sometimes, for wicked purposes, it is attempted to procure abortion, either by strong and acrid medicines, by violent exercises, or by direct application to the parts concerned; but it should be generally known, that there is no medicine which directly and certainly acts on the womb itself; and that to procure abortion by any drug or mechanical violence, is to run the risk of speedy death, of inducing madness, or causing irreparable injury to the constitution.

ABRASION. The destruction of the *mucus* or slime, which in a healthy state lines various cavities, as the stomach, the bowels, the bladder, &c. Abrasion of the skin signifies when a part of it is struck off by violence or any thing rubbing against it.

ABSCESS. A collection of purulent matter in any part of the body, in consequence of previous inflammation. Abscesses form after inflammation, both in the internal parts, and in those which are in sight. When inflammation occurs, it would be better if it went off without suppuration or abscess; but if this cannot be prevented, we must endeavour to accelerate its progress by warm fomentations, and by poultices. These are to be made of bread and milk; oatmeal or linseed meal and water, or boiled onions or turnips; and to promote the ripening of an abscess in the inside of the mouth, a roasted fig or apple may be used. When the tonsils (or almonds of the ear) are tending to suppuration, the patient should draw into the mouth the steam of boiling water, alone, or having a little vinegar added to it. In general, those poultices are best which retain their heat the longest, and they should be frequently changed, to prevent their becoming cold, and thus having a contrary effect to what we wish them to have. The tendency to suppuration may be known by the inflammation continuing long; by the stretching pain becoming less; by a throbbing sensation, and the patient's being affected with cold shiverings. When an abscess forms in a place under our inspection, it is accompanied with swelling, whiteness or yellowness of the skin, and a soft feel, as if there were a thickish fluid in a bag. When matter is formed, it must be discharged, and nature endeavours to accomplish this by causing the matter to have a tendency to the nearest outlet: thus an abscess formed in a fleshy part of the body will point to the skin, one in the lungs will burst into the air cells, and one in the liver, either into the belly or by the side. When the abscess is quite ripe, which is known by the pain being lessened, and the matter pointing, it is in general best to give it vent by opening it with a lancet or other clean cutting instrument; and this in the position or situation which is lowest, on purpose to let the abscess empty itself by the weight or the fluid. It is better to have a free vent of our own making than to allow the matter to find its way under the skin to distant and inconvenient parts, or to allow the matter to discharge itself by a ragged and irregular opening. It is almost always proper to make the cut large, as a

small one is nearly as painful, and as it is liable to close too soon, and thus occasion the necessity of repeating the operation. When the abscess is large and deep, a small piece of tent should be put between the lips of the wound, that it may close at the bottom; and this is to be renewed at each dressing. The poultices are still to be continued, till the thick yellow appearance of the matter changes into a thin watery discharge; after this it is proper to discontinue them, for fear of relaxing and weakening the parts; and to dress with cerate or healing ointment.

In scrofulous abscesses about the neck or face, especially in females, it is a matter of difficulty to determine whether it is best to allow them to burst of themselves, or to make an opening with the lancet. Whichever of the methods be employed, the discharge is commonly of an unhealthy kind, and continues long; and a scar remains, for which the surgeon is blamed if he has given vent to the matter. When such abscesses are forming, the surgeon should state the probable course of the aliment, give his advice with prudence and decision, and leave the patient and her friends to decide.

Another way of letting out matter from an abscess is by caustic, viz. the application of some acrid substance, which burns or corrodes the skin, and makes an opening. Some persons are so afraid of a cutting instrument, that this seems to them a preferable way of opening an abscess; but it should rarely be done, as the pain is greater, and the likelihood of deformity is increased. When it is wished, as much as possible to exclude the air from the inside of an abscess, an opening is made by passing a broad cutting needle, for the purpose of bringing through the sides of the abscess a skein of silk or cotton. This is desirable, particularly in lumbar abscesses, or collections of matter coming from the inside of the belly, and pointing at the upper part of the thigh; as air admitted into them is often found to be the cause of hectic fever, and consequent general ill health. *See* LUMBAR ABSCESS.

The degree of danger which attends an abscess, depends on its situation and its consequences. If it is situated in the lungs, it may burst into the air cells, and prove fatal by suffocation; or if in some of the viscera of the belly, it may be effused in the cavity of the peritoneum or investing membrane of the bowels, and excite inflammation there. Large abscesses are dangerous by the wasting discharge with which they are accompanied; and by the hectic fever and general symptoms which in certain constitutions follow them.

ABSORBENT MEDICINES, more properly termed ANTACIDS, seem to derive their name from the spunge-like action of the principal of them, chalk and magnesia. Their effect is to remove sourness and heartburn from the stomach, which they do by combining chemically with an acid existing there. A neutral salt is formed by their union, which finds its way through the bowels, and produces a laxative or binding effect according to the absorbent used. Thus if there is sourness of the stomach, known by the disagreeable and painful feeling of heartburn, water-brash, and sour-belchings, a tea-spoonful of magnesia taken into the stomach in water, or any convenient vehicle, will combine with the acid, and a laxative salt will be formed, which will open the bowels gently; but if, in the same complaints, prepared chalk be taken, the effect will be to produce a salt, which has a tendency to occasion costiveness: the state of the bowels is therefore to be attended to, in determining our choice of the absorbent to be used. *See* CHALK, LIME, MAGNESIA, CARBONATE OF POTASH, POTASH.

ABSORBENT VESSELS. Certain small vessels which take up substances from different cavities or from the surface of the body, and convey them into the blood. These substances are, by subsequent processes, either removed out of the body, or employed in its nourishment. Those absorbent vessels which carry from the intestines a white fluid, designed in the future stage of its progress to be converted into blood, are called *lacteals*

those which carry a transparent fluid are called *lymphatics*. It is the absorbent vessels which take into the system medicinal substances applied to the surface with the intention of curing diseases, as mercury; and they also introduce acrid or poisonous substances, as the matter of inoculated small-pox or of cow-pox, the poison of some reptiles, and the saliva from the bite of a mad dog. It is the absorbents that carry off the effused blood and other fluids which form the black and blue appearance where a stripe or blow has been inflicted.

ABSTERGENT. Cleansing or purifying; applied to washes supposed to purify the skin. Not much used by respectable medical writers, though quacks have plenty to say about abstergent lotions.

ACCESSION. The approach or beginning of a disease, or of some particular symptom of it: thus the coming on of a fever, or the beginning of the fit of an ague, is called its *accession*.

ACCIDENT. The unexpected and sudden injuries which happen to the body, commonly spoken of by the name of accidents, are so numerous, and may lead to consequences so serious, that every person should be aware of their probable occurrence, and should acquire the knowledge and presence of mind necessary to treat them properly till medical assistance can be procured. Under the following heads will be found directions for treating the most frequent of them: Burns, Scalds, Cuts, Falls, Fractures, Dislocations, Bruises, Contusions, Wounds.

ACCOUCHEUR. A medical person who attends women in delivery; or who particularly attends to the treatment and diseases of women during their confinement.

ACESCENT. A term applied to food or substances taken into the stomach, which are apt to become sour.

ACETABULUM. The deep hollow in the haunch bone, in which the round head of the thigh bone is received and moves. It forms a joint of the ball and socket kind, admitting of free motion in every direction. A strong ligament grows from the summit of the round head of the thigh bone, and is attached near the bottom of the cup-like cavity. The thigh bone may be dislocated from the cavity in various directions; and the joint is the seat of the distressing and dangerous affection commonly called the hip-disease. *See* Dislocations *and* Hip-disease.

ACETATE. A salt, in which the acetic acid or vinegar is combined with an alkali, an earth, or the oxyd of a metal. The acetate of lead, known by the name of the sugar of lead, is composed of the acetic acid and the oxyd of lead. *See* Sugar of Lead.

ACETIC ACID. *See* Vinegar.

ACHILLIS TENDO. The name by which anatomists designate the strong sinew which is continued from the fleshy part of the back of the leg to the bone of the heel. It is so called from the fabulous story in the Grecian poetry, which relates that the mother of Achilles held him by the heel when dipping him in the Styx to render him invulnerable. This tendon is a conspicuous object in the living body. It is sometimes broken by the action of the muscles, in dancing, leaping, and other violent exertions. The patient seems to hear a crack as of a whip, or as if he had broken a nut with his heel. Sometimes awkward reapers cut the tendon of their companion's heel with the sickle. When this tendon is cut or ruptured, the power of extending the foot is lost, and the patient becomes lame. The cure depends on keeping the broken ends together by a contrivance which bends the knee and extends the foot or ankle joint. The following, which was used in the case of the first Dr. Monro, will give some idea of the contrivance alluded to: "A footsock or slipper was made of double-quilted ticking, from the heel of which a belt or strap projected, of sufficient length to come up over the calf of the leg. A strong piece of the same materials was prepared, of sufficient breadth to surround the calf, and this was fastened with lacings. On the back part of this was a buckle, through which the strap of the footsock was passed, so that the foot could be extended, and the calf brought down at plea-

sure." It must be remembered that the bending of the knee joint is partly performed by the upper part of the muscles of the calf, which are inserted into the ends of the thigh bone, and therefore if the knee be stretched, this will tend to draw asunder the separated portions of the injured tendon. Much caution is requisite for many weeks or even months after the accident; and even through life it is prudent to abstain from all violent and irregular exercise.

ACID. A substance possessed of the following assemblage of properties: A sour taste, the power of changing the vegetable blue colours into red, and of combining with alkalis, with earths, and with metallic oxyds. Acids are a class of bodies of great importance in chemistry, in pharmacy, and in medicine. Some acids, as the sulphuric, nitric, and muriatic acids, have a very powerful action, and corrode or destroy animal and vegetable substances. Most acids, when properly diluted and taken internally, are cooling, and obviate the tendency to putrefaction, which they also do out of the body.

Acids may be divided into mineral, animal, and vegetable, according to the kingdom of nature from which they are derived. The principal acids from the mineral kingdom are the sulphuric or vitriolic, the nitric, the muriatic, the carbonic, the fluoric; from the animal kingdom, the phosphoric, the prussic, and the uric. The vegetable acids are very numerous, as the acetic acid or vinegar, the oxalic, the tartaric, the citric, the malic, the benzoic, &c. Under each acid that is used in medicine or for domestic purposes, shall be stated such properties as are likely to interest the general reader.

ACIDITY OF THE STOMACH. A disagreeable sensation as of sour air or liquids discharged upwards from the stomach. Many articles of diet are apt to cause this acidity in stomachs whose powers of digestion are impaired; and in some constitutions otherwise perfectly healthy, certain articles of diet give rise to it. Butter, pastry, fish, vegetables, and astringent wines, as also broths, especially those of veal and lamb, are to be avoided by those who have this tendency to acidity. In certain stages of the process of digestion, the food becomes sour, but being counteracted by the healthy secretions of the stomach, no inconvenience arises from it. If the stomach secrete a vitiated gastric juice, the symptoms of acidity will show themselves.

Treatment. As acidity is often connected with accumulations in the bowels, it is proper to begin our measures for relief by giving a purgative medicine, as three grains of the extract of colocynth, with two or three of calomel. The medicines described under the title of absorbents, are to be used in acidity of the stomach, viz. a tea-spoonful of magnesia, or of prepared chalk in a little water; and these, combining with the acid in the stomach, form a salt either innoxious or salutary. This will remove the evil for the present, but a permanent cure must be attempted by a proper regimen, by avoiding articles of food which have been found to disagree, and by the use of gentle laxative medicines. Vegetable bitters, with the addition of an aperient salt, are useful in strengthening the stomach. An infusion of quassia to the extent of half an ounce or six drachms, with a drachm of tartrate of potash, and a drachm of tincture of cinnamon, form a good draught for this purpose; and may be taken twice a-day for a week or two, till the digestion is mended, and the acidity removed. *See* STOMACH COMPLAINTS.

ACIDITY IN CHILDREN. The stomachs of children are peculiarly liable to be disordered with acidity. This is attended with very troublesome laxity of the bowels, indigestion, and feverish symptoms. *See* INFANTS, *Diseases of.*

ACIDULOUS. A term applied to certain mineral waters having a sourish taste and sparkling appearance, from the quantity of fixed air or carbonic acid gas which is diffused through them. Examples of acidulous waters are to be found in those of Pyrmont, Seltzer, Spa, Carlsbad, and Scarborough. They are tonic and diuretic,

and in large doses, they produce for a time a degree of excitement or exhilaration.

ACONITE, LARGE BLUE WOLFSBANE, MONK'S HOOD, *(Aconitum Napellus)*, a plant found in different parts of Germany, and cultivated in our gardens. Its effects on the animal body are narcotic or stupifying; its active qualities appear to reside chiefly in the root. When chewed, a slight sensation of acrimony is first perceived, afterwards the point of the tongue appears to lose its feeling, and a sharp heat of the mouth succeeds, followed by trembling and chilliness. The fatal symptoms are convulsions, giddiness, loss of reason, violent purging, faintings, cold sweats, and death. If it be soon discovered that a person has swallowed any of this poisonous substance, the stomach must be quickly evacuated; and one of the readiest means of doing this is to give thirty grains of sulphate of zinc, (white vitriol) dissolved in water. If this is not at hand, a spoonful of table mustard, or large draughts of warm water may be tried; but when the poison itself has brought on the vomiting and other bad symptoms, we must endeavour to allay them by brandy, ether, or other cordials, though our hopes of doing so cannot be sanguine. About sixty years ago, this substance was employed in medicine, first by Dr. Storck of Vienna; and, like most substances newly discovered or newly applied, was highly extolled; but it is now less used than formerly. The extract or inspissated juice is said to have a beneficial effect in some cases of chronic rheumatism, and in some of intermittent fever, connected with disease of the viscera or internal organs. The dose is from half a grain to two grains.

ACOUSTICS. The science which treats of hearing, and the propagation of sound.

ACRID. Sharp, heating, irritating, or corrosive. It is sometimes used as a noun; thus we speak of chemical *acrids*.

ACRIMONY. A quality of a fluid or humour by which it irritates, corrodes, or dissolves any part of the animal body: Thus the discharge from cancerous and other sores is distinguished by great acrimony.

ACROMION. The top of the shoulder blade.

ACTION. A word of pretty various and extensive meaning in medical and physiological science. We talk of the *action* of remedies, meaning the effect which they produce on the body; of the *action* of the muscles, meaning the motions they perform; and when an ulcer remains long without alteration for the better or worse, we say it wants *action*. The word *action* is sometimes used as synonymous with *function*; thus the animal or vital *actions*, mean the animal or vital functions.

ACTON WATER. A purging water procured from Acton, a village near London.

ACTUAL CAUTERY. A method of burning or corroding by a heated or flaming body, as distinguished from *potential* cautery, where the same effect is produced by chemical substances of a corrosive nature. Burning by heated iron, by the burning of moxa or cotton, are instances of the use of the actual cautery. Burning with a hot iron is sometimes necessary to stop bleeding in the mouth, where blood-vessels cannot be reached in the usual way; and it is often of service in assisting nature to throw off parts of diseased bones. The actual cautery has been proposed in rheumatism and other painful affections.

ACUTE. A term applied to diseases which are attended with severe or painful symptoms, and which generally run their course in a short time. Distinguished from acute, are chronic diseases, slower in their progress, less alarming in their symptoms. Fevers, croup, and pleurisies, are acute diseases; stomach complaints, dropsy, consumption, and cancer, are examples of chronic diseases. Rheumatism is acute at first, but in many instances is apt to become chronic. Acute diseases are never to be neglected, or trusted to nature, but require speedy and active treatment.

ADEPTS. A term borrowed from the alchymists, who spent their time, their labour, and their fortune, in seeking for the philosopher's stone. Those who were thought, or who pretended to have *got* it, were called *adepti*. The term is now used, but somewhat in a ludicrous sense, for those who are skilful in any pursuit.

ADHESION. A growing together of parts. The surfaces of neighbouring parts, when deprived of the skin, and not kept carefully separate in the progress of cure, are apt to adhere or grow together; for instance, if several of the fingers be burnt, they would probably grow together, if not dressed separately. *See the next article.*

ADHESIVE INFLAMMATION, is that which is followed by the growing together of parts. Certain fine membranes of the body, when affected with inflammation, are apt to grow to the neighbouring parts. For instance, the chest is lined with a smooth membrane which also covers the lungs, and in the healthy state, the lungs are quite freely moved within the chest; but inflammations of this membrane are so common, and so frequently followed by a more or less extensive union of the lungs to the inner surface of the chest, that a great proportion of the bodies examined by surgeons after death, are found to have adhesions in the chest; and we therefore conclude that in some period of their lives they had been affected with inflammation. It is on the adhesive inflammation that the modern operation for the cure of aneurism depends. A narrow ligature being tied round an artery, cuts through its internal and middle coats, and from the inner surface of the vessels a clear lymph is poured out, which joins the two sides of the vessel by the adhesive inflammation.

ADHESIVE PLASTER. See DIACHYLON.

ADIPOCERE. A term invented by the French chemists to signify the substance resembling spermaceti, into which animal muscle is converted, by being exposed to a stream of running water; and which is also found where large masses of putrefying animal matter are heaped together, as in certain burying-grounds.

ADIPOSE MEMBRANE. The cellular texture of the body, considered as inclosing the fat in its cells.

ADVENTITIOUS. Any thing that accidentally, and not in the common course or progress of a disease, occurs in the system, is said to be *adventitious*.

ÆTHER. A liquor highly volatile and inflammable, fragrant, and pungent to the taste. It is prepared by adding together acids and spirit of wine, and distilling with great caution. The ether, which is the produce of distillation, varies according to the acid used; hence we have sulphuric, nitric, muriatic, and acetic ethers. The ether in most frequent use is the sulphuric. It is used internally as a stimulant and cordial, and to relieve cramps, and other irregular actions of the system. It is given to persons in asthma, hysterics, and convulsions; and when certain vegetable poisons have brought on alarming debility, it is employed to rouse the system into action. The dose internally is half a tea-spoonful in water; or the like quantity with twenty or twenty-five drops of laudanum, and half a glass of water. By its volatility and rapid evaporation, it may be made to produce a great degree of cold on the surface of the body, and it is hence used to alleviate the pain of toothach and headach. A portion is placed in the hollow of the hand, and the hand being put on the part affected, great heat is produced; and by the sudden removal of the hand, the ether is allowed to evaporate, and the cold that follows sometimes relieves the pain. Great care should be taken to keep lighted paper, or candles, at a distance from the vessels in which ether is kept.

AFFECTION. The state of being affected with any morbid condition or action. Thus we say, a person labours under a febrile *affection*, or has an *affection* of the skin.

AFFINITY. A term used in chemistry to denote the tendency of different substances to combine chemically together: thus acids and alkalis combine by chemical *affinity*, and form neutral salts.

AFFUSION. The application of cold to the surface of the body by dashing or pouring cold water upon it. To Dr. Currie of Liverpool, chiefly, we are indebted for the application of the cold affusion in the cure of fevers and some other diseases. In the fever commonly known by the name of *typhus*, the effects produced are wonderfully beneficial; but it is a remedy of apparent harshness and of real hazard, and requires a discriminating judgment to determine the propriety of its employment. The cold affusion must not be attempted during the shivering which commonly commences the paroxysm of fever; it should not be used when the heat of the body, as measured by the thermometer, is under 97° or 98°, the natural standard; and it is exceedingly dangerous when there is general and profuse perspiration.

The effects of the cold affusion on patients in fever, when used judiciously, are found to be a diminution of the feverish and irritating heat, abatement of the thirst, refreshing sleep, and gradual restoration to health. Beneficial, however, as the cold affusion unquestionably proves in various febrile diseases, it is now much seldomer employed than formerly; effects nearly as good may be obtained by general or partial spunging of the body with water, cold or tepid, either alone, or mixed with a little vinegar; and modern experience has considerably altered the theory and practice of physicians in typhus within the last thirty years. Still, however, the judicious practitioner will not forget that he has, in the timely use of the cold affusion or spunging, a remedy of great efficacy, and of much utility in the abodes of filth and poverty; as also in naval aud military practice, where the sufferers are generally strong and robust, and where cheap and speedy remedies are of primary importance. In the scarlet fever, it is still employed with the happiest results; and provided the medical man, or even the sensible parent, or nurse in charge of patients in this disease, attends to the heat, the dryness of skin, the thirst, and other violent inflammatory symptoms, they may with great safety, and with the most decided benefit, either spunge or bathe the sufferer, and will be delighted with the prompt and soothing effects that ensue. Care must be taken not to use the cold bath in the decline of the fever, or when much putrescence of the throat and system is present, as at that time the powers of nature are feeble, and would probably be overpowered by so active a practice. In a few hours the washing may be repeated, and the patient, in many cases, will be so sensible of its good effects as to beg its repetition. Internal remedies must be used at the same time. *See* Scarlet Fever.

AFTER-BIRTH. The thick and spungy cake by which the embryo is attached to the internal surface of the womb, and which in healthy and ordinary labour is thrown off by the contractions of the womb in what is called the third stage of labour. When it is retained too long, it may give rise to flooding; and, therefore, its expulsion is to be gently solicited by rubbing the belly with the hand. If a delay of more than an hour should take place between the delivery of the child and the coming away of the after-birth, it will be necessary for an experienced practitioner to interfere.

AFTER-PAINS. In the child-bed state, women are not unfrequently distressed with sharp pains in the belly, back, and loins, recurring at intervals for several days after delivery. These resemble the pains of labour, being, however, somewhat slighter in degree. They rarely continue above two or three days, and are not attended with any danger. They seldom are troublesome during a first inlying, but afterwards they are more frequent, in proportion to the number of children a woman has had One great

matter is, to be sure that the pains complained of are after-pains, and not the effect of some more serious disease, as inflammation. After-pains are distinguished by being alternated with intervals of ease, and by being generally attended with the discharge of some coagulated blood from the womb; pain is not excited by pressure on the belly. Other symptoms, along with the pains, indicate the existence of some other disease. After-pains are alleviated by giving an opiate shortly after delivery, and repeating the medicine in smaller doses every six or eight hours, taking care not to injure the nervous system by too much opium, nor to bring on constipation of the bowels. Warm flannels may be applied to the lower part of the belly, and in some cases an opiate clyster may be required.

AGARIC. A spungy substance obtained by drying certain excrescences which grow on oak stumps; sometimes it has been used to stop bleeding.

AGGLUTINATION. The sticking together of substances or of parts of the body.

AGRIMONY, *Agrimonia Eupatoria*. A plant, believed to be slightly astringent, but in this country little used.

AGUE. The popular English name for *Intermittent Fever*. *Ague* is principally applied to the cold stage. The whole disease is vulgarly called *Fever and Ague*.

Symptoms. This fever consists of various fits or paroxysms, each of which is made up of three stages or successions of symptoms. These stages are the cold, the hot, and the sweating stages. When the sweating stage is finished, the patient is free of complaint, or the disease intermits till a future period, when the same stages as before succeed each other. The time during which the patient is free of the disease varies in different kinds of intermittent fever, and gives its name and character to the disease. If the stages run through their course every day, it is called a quotidian ague; if they begin again every third day, a tertian; if every fourth day, a quartan. Several minuter varieties occur, with which it is unnecessary to trouble the general reader.

The following is a description of the paroxysm of an ague.

Cold Stage. The person is affected first, with a languor, or sense of weakness and faintishness, is unwilling to make any exertion, feels uneasiness in doing so, and frequently yawns and stretches himself. At the same time, the face and other parts of the body become pale, the features shrink, and the skin appears as if cold had been applied to it. At the coming on of these symptoms, some coldness of the hands and feet, though little taken notice of by the patient, may be perceived by another person. At length the patient himself feels a sensation of cold, commonly first in his back, but passing thence over the whole body; and now his skin feels warm to another person The patient's sense of cold increasing, a tremor occurs in all his limbs, with frequent shiverings of the trunk of the body. When this sense of cold and its effects have continued for some time, they become less violent, and are alternated with warm flushings. Vomiting sometimes occurs in the cold stage.

Hot Stage. By degrees the cold goes off entirely, and a heat greater than natural prevails, and continues over the whole body. With this heat, the colour of the skin returns, and a preternatural redness appears, especially in the face. Whilst the heat and redness come on, the skin is relaxed and smooth, but for some time continues dry. The features of the face, and other parts of the body recover their usual size, and become even somewhat swollen. In this state, it is not unusual for delirium and other affections of the intellectual functions to come on.

Sweating Stage. When the heat, redness, and fulness have increased and continued for some time, a moisture appears upon the forehead, which gradually becomes copious, and extends over the whole body. As the sweat flows, the heat of the body abates; the sweat, after continuing some time, gradually ceases; the body

returns to its usual heat, and most of the functions are restored to their ordinary state.

The Period of Intermission. It is hardly to be expected, however, that after so much derangement of the system as necessarily occurs during the three stages of an intermittent fever, matters should return completely to the healthy state; accordingly, the person does not feel quite well on the intervening days; and in weakly constitutions there is much derangement of the health, and instead of complete intermission, there is only a slight abatement of the feverish symptoms. In general, with wonderful regularity, these symptoms again appear, and again run their course at an interval, varying according to the *type* or character of the fever; and if not obviated by proper remedies, they weaken the constitution, lay the foundation for diseases of the internal organs, which lead to dropsy or complaints that prove fatal.

Causes. It is now generally agreed among physicians, that the only cause of intermittent fevers is the bad air arising from marshy grounds, where animal and vegetable remains run into putrefaction, probably by the breathing introduced into the body. Hence agues are rare in dry, well cultivated lands; and common in marshy, fenny countries, where water is allowed to stagnate, and animal and vegetable matters are allowed to putrify. So evidently does this disease arise from the air blown from marshes, that in countries where certain winds prevail much, and blow over fenny tracts of country, agues are common among the inhabitants to leeward of them; while others equally near to the tainted spots, but to windward of them, continue healthy. Instances have been known of militia regiments, raised in healthy counties of England, losing their florid and robust look, characteristic of the English peasantry, and sending numbers of their men to hospital, ill of ague, when quartered in marshy districts. The ague has been introduced into ships at anchor in a river exposed to the land wind of marshes, while others in the same situation, have escaped the sickness by taking the precaution of shutting the ports on the side whence the wind blew.

When a person has once had a severe ague, he is very subject to its recurrence, from causes difficult to know or to avoid. A person may have had an ague in Holland, or the West Indies, have been perfectly cured of it; and ten or twenty years after he may be seized again in a country, where agues among the inhabitants are hardly known. The east wind seems to have wonderful influence on such occasions; and it is generally a hopeless task to attempt the cure of an ague when the wind blows from that ungenial quarter. Irregularities in diet, disorder of the bowels, and some obscure causes seem also to render relapses more frequent. Agues are more common in spring and autumn than at other seasons of the year.

Prognosis. The degree of danger attending an ague, is to be estimated by considering a variety of particulars, as the season of the year, the situation of the place, the type of the fever, the violence of the attacks, and the postponing or anticipating of the paroxysms. The agues of spring are least dangerous, and in popular opinion, have even been regarded as salutary to the constitution; those of autumn are more malignant, and are apt to induce putrescent symptoms, and fatal exhaustion. The agues of warm climates are more quickly dangerous to life than those of more temperate regions; but even there, cases occur of considerable severity, and relapses are not unfrequent. The fever of the most manageable type is the simple tertian; the quotidian, the quartan, the double tertian, and other complications are more difficult of cure. "The attack of intermittents is sometimes attended with the most alarming symptoms, such as syncope, apoplexy, a great load on the chest, with threatening suffocation, epileptic paroxysms or violent spasms, or a coldness, which increases till the patient sinks into torpor, soon followed by death. These are circumstances of peculiar dan-

ger, and require the most minute attention. The hot fit is also sometimes so violent as to be attended with delirium, and occasionally with rupture of the vessels." (PARR's *Medical Dictionary.)* When the paroxysms are later of coming on, we hope the disease is abating; and the reverse, when they come on earlier. Like most diseases, agues are attended with more danger in aged debilitated constitutions, that in the robust and vigorous. When King James I. was attacked with the ague of which he died, in March, 1625, he was reminded that an ague in the spring is physic for a king; but he very properly replied, that the proverb was meant of a young king.

No ague, however slight it may appear, and at whatever season, should be suffered, without opposition, to repeat its paroxysms; as it is apt to lay the foundation of disorders in the internal parts, and particularly to induce a swelling and hardness of the spleen, which may lead to dropsy and prove fatal.

Treatment. 1. *In the cold stage.* When a patient residing near marshy ground, after feeling unwell for some time, losing his complexion, looking sallow, and becoming feeble, is at last seized with the regular coldness and shivering, which usher in the first stage of an ague, means are to be employed to shorten this by giving warm drinks, as gruel, barley water, tea, or the like; putting him to bed, and supplying sufficiency of bedclothes. It is imprudent to give wine or spirits, as this might make the hot stage violent and alarming. It would, on the other hand, be also highly dangerous to do any thing that would lessen the vigour of the system, as bleeding or giving cold drink.

2. *In the hot stage.* When the hot stage is formed, it has been found an excellent practice to give a full dose of laudanum, as forty drops, in a warm vehicle; as this has the effect of quickly bringing on the sweating stage, which nature employs as the means of quieting the system, and restoring the functions to their ordinary state. In the hot stage, if there is great determination to the head, or violent local pain, with much throbbing and strength of pulse, blood-letting for once or twice is allowable and even necessary, but it is not safe to repeat it in various successive paroxysms.

3. *In the sweating stage.* The management of the patient in the sweating stage consists in taking care that the sweat be not suddenly checked; and that it do not continue too long or too profusely. The bedclothes are to be cautiously reduced in quantity, mild drinks to be given, but not too hot; and if there is an inclination to sleep, it ought to be indulged.

4. *In the intervals of the paroxyms.* When one paroxysm is over, the patient must take care not to expose himself to cold or damp, to a fresh application of the marsh effluvia, to any thing likely to disorder the stomach, nor to any thing likely to agitate or depress the mind. The great business now is to prevent a repetition of the fits, and so to establish a permanent freedom from them. This is hardly to be expected at the first interval; the most to be hoped for is, that we may make the second attack to be later of coming on, until by gradual successions of postponed paroxysms, the disease abates its severity or ceases its attacks. Many remedies have been proposed for the cure of agues; many of them, obviously quite unlikely to have any effect on any disease whatever, unless by their influence on the patient's mind, and by that medium on the corporeal frame. Such are the disgusting expedients of swallowing a live spider, or holding a toad in the hand till it dies, or splitting a hard boiled egg, and applying the portions of it to the wrist, or exciting terror or surprise. Happily, however, there is one medicine of great efficiency in the cure of intermittent fevers, and which rarely disappoints the hopes of those who employ it. This valuable substance is the Peruvian Bark. It is to be given liberally between the paroxysms, in any liquid that may be most convenient for the patient. A spoonful, or even two, given in wine, or milk, or water, every second hour, especially on

the day previous to the expected fit, will often have the effect of postponing, and ultimately curing the disease.

The Peruvian bark is in general safe, though in some constitutions it is apt to occasion sickness and vomiting. When this takes place, from five to ten drops of laudanum may be added to each dose; and a few drops of the elixir of vitriol, or of the diluted sulphuric acid, have an additional good effect. Modern chemistry has extracted from yellow bark a substance having some of the properties of an alkali, to which the name of *quinine* has been given. This, combined with sulphuric acid, forms the sulphate of quinine, eight grains of which are equivalent to an ounce of bark. By this happy discovery, we get rid of all the inert matters of the bark, which are apt to load the stomach and bowels, and we possess a substance which in small bulk has all the activity of the bark, and which may be given even to very delicate patients, and to children, in many of whose complaints bark is highly necessary, but from its bulk and nauseousness cannot be given in sufficient quantity. Two grains of sulphate of quinine may be given, made with conserve of roses into a pill, or dissolved in the infusion of roses, or in well diluted sulphuric acid.

A medicine of great efficacy in the cure of ague is arsenic in certain preparations; but it is a substance of such virulent activity, that no person should presume to prescribe it except a practitioner of caution and experience.

The best form of employing it, is what is called Dr. Fowler's solution, an account of which will be found under ARSENIC, but there are very few cases indeed of ague, which may not be treated successfully by milder and less hazardous remedies.

Other circumstances, besides the giving of these drugs, must also be attended to; the bowels are to be kept open by neutral salts, as the sulphate of magnesia, the sulphate of soda, or Rochelle salts; by calomel joined with rhubarb, or with jalap; or by the infusion of tamarinds and senna. Little progress in the cure can be expected unless the patient be removed from the neighbourhood of marshy ground; the continuance of an easterly wind will retard the cure; and for a long period, the same wind will be apt to bring a relapse of the disease. The agues of spring are often accompanied by inflammatory symptons; for which bleeding and the other remedies useful in that state are to be employed; while those of autumn are more of a putrid and malignant nature, and require a very free use of the bark, with wine and other stimulants and cordials.

Means of Prevention. Persons who are exposed to the air of marshes should use various measures of precaution to prevent, if possible, the attacks of ague. They should use a diet generous, but not intemperate, with a moderate quantity of wine; they should not expose themselves to the dews of night, and should be careful to keep closed the windows and doors of the sides of their dwellings from which the wind may blow the effluvia from the marshes. When military or naval expeditions are conducted to climates where agues are common, humanity as well as prudence should enforce on the minds of those in command, the duty of preventing by every means the bad effects of the unhealthy place, by choosing a proper situation for their camp, and stationing the ships, when practicable, out of the sphere of the malignant influence. The disease which was so fatal to the British at Walcheren, in 1809, was the autumnal ague in its most destructive form.

AGUE CAKE. The popular name for a hard swelling on the left side of the belly, which is frequently owing to the enlargement of the spleen after intermittent fevers. When the Peruvian bark was first introduced, many bad properties were ascribed to it, and among others it was said to be the cause of this swelling of the spleen; but that was owing to the disease, and not to the medicine.

AIR. An invisible elastic fluid, of which there are several kinds, varying

from one another as much in their properties as the grosser fluids, oil, water, and mercury, differ from one another The term *air*, when used without any addition, is now restricted to mean common air, or the air of the atmosphere; other elastic fluids being called *gases*, when cold does not condense them; and *vapours*, when it does. Thus we have hydrogen *gas*, or inflammable air, permanent at all temperatures; and the *vapour* of water, or steam, which is condensed by cold. We shall now mention some particulars respecting atmospherical or common air. The researches of modern chemistry have determined that the atmosphere is not a uniform fluid, but a mixture of two principal elastic fluids, with a few others in very minute proportions, and that it holds in solution a varying quantity of watery vapour. The composition of one hundred parts of atmospherical air, freed from all adventitious mixture, is seventy-nine parts of a gas called azote, or nitrogen; and twenty-one parts of another gas, named oxygen gas. Atmospherical air is indispensably necessary for the breathing of animals; and atmospheric air may also be considered as the great supporter of combustion; though inflammable bodies will burn in some other gases, yet these gases are uncommon, except when artificially produced. When, by various methods familiar to chemists, the oxygenous portion of the atmosphere is separated from the azotic, it is found that an animal dies, and a burning body is extinguished in azote; we hence conclude that it is only the oxygenous part of the atmosphere that is fit for the purposes of respiration and combustion. Air is by these processes continually becoming more and more unfit for breathing. It is a curious, but difficult subject of investigation, by what means purity is restored to the air, and how it continues to be fit for the respiration of animals, though exposed to so many sources of contamination. It is believed, that this is owing to the functions of the leaves of plants. When they are exposed to the bright light of day, they are continually absorbing the carbon of the carbonic acid which exists in the air and water on which they feed, and giving out oxygen gas. By this means the purity of the atmosphere is preserved with wonderfully little variation.

Change of AIR *in apartments necessary.* Air that has been long unchanged, in which one or more human bodies have been confined, is possessed of qualities highly dangerous and even destructive; as we see in many instances from the fevers and other ailments which arise in jails, ships, and other confined apartments. Hence the necessity and propriety of free ventilation in houses of every description; of daily admitting a thorough current of air into sleeping-rooms, and indeed into every room of a house. From the neglect of this ventilation, arise the dangerous and malignant fevers in the confined and ill ventilated dwellings in the closes, alleys, and courts of large towns. Since attention has been called to this circumstance, how seldom do we hear of the ship or the jail fevers. Though the fever, which was formerly so fatal in ships and jails, is still lamentably prevalent somewhere or other, and though we still hear of towns or tracts of territory being visited with its depopulating scourge, it is not in ships or jails that it is suspected to take its rise, but in the abodes of slothful and squalid poverty, where no judicious and directing mind enforces the necessity of ventilation and cleanliness.

Even in the apartment where a patient is in bed, the fear of his catching cold should not prevent us from occasionally changing the air of it, by opening the doors and windows for a few minutes at a time, taking care not to expose the sick person to the current of air, but closing the curtains and using such other precautions as common sense will readily suggest.

Means of purifying the AIR *from contagion.* There are various methods practised, to correct the bad air in sick-chambers, and if possible, to destroy its power of producing diseases. Morveau in France made many experiments on the best

means of disinfecting the air, and Dr. Thomson, in his Chemistry, gives the following as the result of these experiments. (Vol. iii. p. 183.) Odorous bodies, as benzoin, aromatic plants, &c. have no effect whatever. There are four substances which have the power of destroying contagious matter and of purifying the air, viz. acetic acid, or vinegar, nitric acid, muriatic acid, and chlorine. Acetic acid cannot easily be obtained in sufficient quantity, and in a state of sufficient concentration, to be employed with advantage. Nitric acid may be attended with some inconvenience, because it is almost always contaminated with nitrous gas. Muriatic acid and chlorine, are not attended with these inconveniences; the last deserves the preference, because it acts with greater energy and rapidity. *See* FUMIGATION, CONTAGION, and CHLORINE.

AIR, *considered with reference to the cause, the cure, or the mitigation of diseases.*

Many circumstances connected with air, which chemistry is unable to trace or explain, are much to be attended to in a medical point of view. Under the article AGUE, we have already mentioned the bad air from marshy grounds; and in the article immediately preceding, we have stated the danger of other fevers, from the malignant effluvia from animal bodies; we have also to mention that the air seems to carry the infection of other diseases, as small-pox, measles, hooping-cough, scarlet fever, &c. Some of these contagions, as the small-pox, taint the air with a peculiar disagreeable smell; but in general, the sense perceives nothing different from common air. The air of certain places is justly supposed to have an influence in giving a tendency to certain diseases, or even to bring them on. The croup is frequent in cold damp situations, exposed to the east wind, or near the sea. The sea air is unfavourable in certain states of consumption; or in affections of the breast, which would probably end in that disease. The mild equable air of the country, unloaded with the endless variety of matters mixing with the air in the neighbourhood of large towns, is favourable to recovery from many ailments, as indigestion, dropsy, jaundice, breast complaints, asthmas, the wasting disease of children, as also to that feeble state of constitution which has not received any appropriate name. It is remarkable that some persons in asthma are not better in air which we should think the purest.—*Change of air*, even to a worse, has been found of service in hooping-cough; but it is useless to attempt a cure by this at an early period of the disease, as it is hardly possible by any means to prevent it from running on a considerable time. In general, it is hardly worth while to try a change of air, till the cough has continued distinctly at least a month or six weeks, with the back draught.

A good deal of the influence of the air on the skin and lungs must depend on its degree of moisture or dryness. When there is much watery vapour in the air, it is less able to receive more; and the perspirable matter from the skin not being carried off, we shall appear to perspire more, though in reality the perspiration is less. In like manner, the watery vapour which is continually thrown off by the lungs is not carried away fast enough by a heavy moist atmosphere; and in certain diseases of the lungs, in colds, consumptions, asthmas, &c. some patients, according to the quantity of watery vapour or mucus exhaled from the lungs, will be benefited either by a dry air, or the contrary. It is wrong, therefore, to lay down any general rule about a particular spot or climate, as its good or bad effects will vary according to the state of the disease in each particular patient.

AIX-LA-CHAPELLE. A town in Westphalia, where there is a sulphureous water with an unusual quantity of sulphur in it. It is clear, but smelling of sulphur, and its taste is salt, bitterish, and alkaline. The temperature varies, according to the distance from the source, and the spring

itself. In the hottest bath, it is about 140°, at the fountain where it is drunk it is 112°. These waters are much frequented by the inhabitants of the Continent, and are useful in those disorders of the stomach and digestive organs, which are apt to arise from luxurious living; and also in certain disorders of the kidneys accompanied by thick, slimy urine. This water is possessed of heating qualities, and must therefore not be used in complaints having any inflammatory tendency, nor in cases of hæmorrhage with activity of the circulating system. The baths at Aix-la-Chapelle are much used externally, and being endowed with considerable efficacy from their sulphureous impregnation, they are of great use in diseases of the skin, and foulness of the same. These baths are highly useful in the stiffness of the joints occasioned by rheumatic affections, and in the weakened state left by palsy. The dose for internal use, and the temperature for the bath, are to be regulated by their effects, and by the constitution of the patient; but it is always proper to begin both at a low rate, and gradually to increase them. The times of drinking these waters are from the beginning of May to the middle of June, and from the middle of August to the latter end of September.

ALBUMEN. The name given by chemists to that animal production, with which we are so familiar in the white of an egg. It forms the principal part of the clear portion which remains at the top of the vessel when blood is allowed to congeal. Albumen coagulates by heat, and by the addition of acids. It constitutes a considerable proportion of the animal solids; and one effect of the heat applied in the various processes of cookery is to coagulate the albumen, and render it solid. The white of eggs is found to be the best antidote for the poison of corrosive sublimate. The term albumen is also used in botany to signify a farinaceous, fleshy, or horny substance, which makes up the principal bulk of some seeds.

ALCHYMY. The art which pretended to confer the power of changing the baser metals into gold, and of discovering a medicine which should cure all diseases, and prolong life to an indefinite period. The exact origin of this pursuit is not precisely known; but it is believed to have been invented in Egypt. It continued very long to be a favourite object; and much knavery and imposture, as well as enthusiasm and credulity, were current among those who embarked in the search after these wonderful acquisitions. Many spent their fortunes and wearied out their lives in the vain endeavour; while the strange substances which they did produce in their countless operations by fire on various productions of nature, with the deep mystery in which they involved themselves and their art, made them be looked upon by the vulgar as magicians, or as dealing familiarly with the powers of darkness. Much as we must pity the delusions of some of the alchymists, and detest the wickedness of others, we should remember that chemistry, now a science of such dignity and importance, is deeply indebted to them; and that many of our most useful medicines are owing to the operations of the alchymists. Lord Bacon compares them to the young men who carefully digged and re-digged their father's field in search of a treasure which they never found; but whose labour was amply repaid by the fertility imparted to the soil which they turned up with other intentions.

ALCOHOL, in strictness signifies the pure spirit obtained by distillation, and subsequent rectifying, from all liquids that have undergone the vinous fermentation. But the term is commonly applied to the spirit, though imperfectly freed from water. Alcohol is generally obtained in proportion to the quantity of sugar contained in the liquor from which it is distilled. It is found in greatest quantity in the wines of warm countries, some of which yield a third of brandy. The stimulating and intoxicating qualities of wines depend on the alcohol which

they contain. A very curious and interesting table has been constructed by Mr. Brande of London, showing the quantity of pure alcohol contained in a variety of wines, and other intoxicating liquors. This table will be found in Appendix, No. IV.

Alcohol, when first distilled, has different qualities, according to the substance from which it is distilled. In this country alcohol is obtained from an infusion of malt, and is called whisky; in the West Indies from sugar, and called rum; arrack is produced in the east from rice: and in France and Spain, brandy is prepared from wine. Gin is alcohol flavoured with the essential oil of the juniper. Spirits are not pure alcohol, but a mixture of alcohol and water. Alcohol, either pure or diluted, is of great use in medicine and pharmacy, as possessing the power of dissolving resins, oils, and other substances of medicinal virtue; and in small quantities they are in many cases highly useful, where we want to stimulate or keep up the action of the nervous system, as their excitement is rapidly communicated by the nerves of the stomach. *See* ARDENT SPIRITS.

ALDERBERRY WINE. A home-made wine from the fermentation of the berries of the alder tree and raisins. It is said to keep better than many of the other made wines, and was formerly thought to possess medicinal virtues; but these are now very little regarded.

ALE. A fermented liquor made from malt and hops, of which last ingredient the quantity used in the making of ale is less than in the making of beer, by which ale is more glutinous and sugary than beer. The addition of the hops renders the liquor valuable by the grateful stimulus which it imparts to the stomach and system; and by the nutritive qualities of ale, its moderate use is far more innocent and useful for the labouring classes than the pernicious drinking of ardent spirits, which are now so accessible and extensively indulged in. Ale is possessed of a stimulating and intoxicating quality, from the quantity of spirit of wine which it contains; and habitual indulgence in it has a tendency to bring on corpulency, fulness of habit, and a disposition to apoplexy, or other diseases of a kindred nature, proceeding from distention of the blood-vessels. To restore strength after debilitating illness, ale or porter may be prescribed for those whose coarser stomachs have been used to them in health; but for others they are not so proper, as they rarely agree with the stomach at that time. Mr. Brande, in the examination of ale, found it to contain nearly nine parts of spirits of wine in the hundred.

ALEMBIC. A chemical utensil, consisting of a body to which a conical head is fitted, and from the side of this a beak proceeds, which is inserted into the receiver. It is used for receiving volatile products from retorts.

ALEXIPHARMACS. Medicines supposed to have the power of preserving the body from the effects of poisons, or of correcting the acrimony of febrile or other injurious matter. It is now common to class and name medicines, from some immediate and obvious effect, as emetic, cathartic, &c. and not to use such vague, doubtful, and comprehensive appellations as the above.

ALGAROTH, or POWDER of ALGAROTTI, a preparation of antimony, so called from Algarotti, a physician of Naples, who used and described it. Like other antimonials, it acts as an emetic and purgative; but as we have safer and more manageable preparations, it is now seldom used. *See* ANTIMONY.

ALIMENTS. Whatever is capable of being used as food, and of supplying the waste of the animal body, is called aliment. The great variety of nutritive substances may be classed and arranged in various ways, as animal or vegetable; fish, fowl, or flesh; solid or liquid, &c. or they may be classed according to the particular principles, as they are called by chemists, on which the nutritive qualities depend. Some of these principles

are fibrin, albumen, gelatine, oil, and fat, gluten, fecula or starch, mucilage, sugar, acids, &c. On this plan Dr. Paris classes aliments in the following way: Class I. Fibrinous aliments. Comprehending the flesh and blood of various animals, especially such as have arrived at puberty, venison, beef, mutton, hare. II. Albuminous. Eggs: coagulable animal matter. III. Gelatinous aliments. The flesh of young animals, veal, chickens, calf's foot, certain fishes. IV. Fatty and oily aliments. Animal fats, oils, and butter; cocoa, &c., ducks, pork, geese, eels, &c. V. Caseous aliments. The different kinds of milk, cheese, &c. VI. Farinaceous aliments. Wheat, barley, oats, rice, rye, potato, sago, arrow root, &c. VII. Mucilaginous aliments. Carrots, turnips, asparagus, cabbage, &c. VIII. Sweet aliments. The different kinds of sugar, figs, dates, &c. carrots. IX. Acidulous aliments. Oranges, apples, and other acescent fruits.

The numerous substances classed above, vary much both in their nutritive and digestible properties. When we talk of a substance being nutritive, we mean that it has the power to supply more or less nourishment to the body, without saying whether the stomach and the other assimilating organs find much or little difficulty in conducting the process; and when we say that a substance is digestible, we mean that the stomach and its coadjutors take with ease the nutritive portion from it. Thus a substance may be very nutritive, but not very digestible; and the reverse may also be true. Fat oily aliment is very nutritive, but of difficult digestion. This is what people mean when they say such an article of diet is *heavy;* though oil is specifically light, and often floats on the other contents of the stomach. The digestibility of food, considered without reference to the stomach, depends on a variety of circumstances, particularly the state of the food with regard to texture and consistence; and this texture in animal food depends on the time that has elapsed since the animal was killed, on its age, sex, feeding, and mode of killing; and above all, on the operations of cookery. In a matter which varies so much in different individuals, it is not easy to lay down any general maxims with regard to the digestibility of different kinds of food; but it is found pretty generally to be the case, that tender mutton is the most digestible food. Beef is not quite so easily digested, but it is equally nutritious. Soups, oils, and jellies, are digested with some difficulty, both on account of their tenacity, and because they are not so easily acted upon by the mechanical powers of the stomach. For some observations on the different aliments, *See* Beef, Mutton, Fish, Cheese, Milk, &c. *See also* Cookery *and* Diet.

ALIMENTARY CANAL. The long and winding passage through which the food proceeds in an animal body. It begins at the mouth and ends at the anus. Its principal parts are the following: The mouth, leading to the gullet at its back part, which gullet is closed tightly unless when the food is in the act of being swallowed. The gullet runs down within the chest, and passing through an opening in the diaphragm, ends at the upper opening of the stomach, a large capacious bag. At the lower end of this bag, which stretches to the right side, there is a ring of muscular fibres which prevents the food from passing too quickly out of the stomach into the bowels; and which has the power of repelling, for a time at least, substances which ought not to pass. The portion of the gut below this, about twelve inches in length, and called from that circumstance *duodenum*, is not loose and floating, like some other portions of the tube, but fixed, to allow certain canals to enter, which convey bile from the liver, and a fluid from the pancreas or sweetbread, which fluids are necessary in the process of digestion. From the important operations which go on in this portion of the gut, it has been called a second stomach. The next portion of the

gut is called *jejunum*, (fasting) from the circumstance of its being commonly found empty. Next comes the *ileum* or small intestines, forming many convolutions, turning and winding upon themselves, admirably attached to a membrane which is fixed to the back bone; and these small intestines are so constructed in their inner surface as to give a large space for the countless vessels which open into them and proceed from them. The small intestines suddenly expand into a canal of much larger bore, at the commencement of which there is a large bag: this is called the *caput cæcum coli*, or blind gut. Then the intestine proceeds upwards on the right side of the loins, crosses the body a little above the navel, then turns downwards, and at last ends in the straight gut near the anus. From the part where the small intestines end, to the terminations of the whole canal, seems to be the place where the excrements assume their shape and character. There is a valve which allows substances and fluids to pass readily from the ileum downwards, but which effectually prevents any thing from going in a contrary direction, unless in cases of severe disease, as rupture or iliac passion. The greater part of the alimentary canal is in continual motion in one direction, one part propagating its motion to that immediately below it, something in the manner in which a worm pushes itself forward. Physiologists call this the peristaltic motion. The different changes that take place on the food in its long passage through this canal shall be stated under the article DIGESTION.

ALKALI. A substance endowed with the following properties: It changes the vegetable blue colours to green, forms a substance with acids having qualities quite distinct from both acids and alkalis, and forms soap when mixed with oils. There are two kinds of alkalis, the fixed and the volatile.

ALKALI, FIXED. The fixed alkalis that have been long known, are potash and soda; but later chemists have added another alkali to the list, viz. *lithia*, which does not in its properties essentially differ from those formerly known. Potash is principally obtained by burning certain vegetables to ashes, dissolving in water the parts which it will melt, which are the alkali mixed with other substances, and allowing this solution to run into iron pots; hence the names of *pot-ashes* and *vegetable alkali*. Soda may also be procured by burning vegetables, particularly those that grow near the sea; but as a great deal of soda is found in many minerals, as rock-salt, &c. it is commonly called the *mineral* or *fossile alkali* The volatile alkali is the well known substance called ammonia, or hartshorn; it is called *volatile* from its being separated very easily from other bodies by heat.

All the alkalis are of much and varied use in the arts and in medicine. At one time a great deal was expected from the power of alkalis to dissolve stone in the bladder; but even when the strongest alkali is applied to a stone out of the bladder, it is not every stone that can be affected by it; and it is quite obvious that undiluted alkali would occasion the most frightful injury to any part of the animal body to which it can be applied. When the alkali is rendered mild, or combined with carbonic acid, forming carbonate of potash, it may be taken into the stomach in a very diluted state; but before it can pass, with the food and drink, through the various complicated processes and changes which they undergo before they reach the blood, (and it is only from blood that the kidneys separate the urine) its peculiar alkaline properties must be quite lost, and no probability remains that it will act as a solvent when it gets into the bladder. There are, however, some stones which are principally composed of an acid, called by chemists the uric acid, which seem, if not to be dissolved, at least to be kept from increasing when the patient is using alkaline medicines; but this is owing to their correcting the faulty digestion which seems to give rise to the formation of the stone,

and not at all to their power of dissolving it, when formed.

The fixed alkalis for many centuries resisted all the attempts of chemists to decompose them, and they were, therefore, considered as simple bodies; but about the end of the year 1806, Sir Humphrey Davy, by a skilful application of galvanism, succeeded in demonstrating that they are compound bodies; potash and soda respectively being made up of a metallic basis and oxygen.

ALKALI, VOLATILE, or HARTSHORN. *See* AMMONIA.

ALKALI, CAUSTIC. Alkalis are said to be caustic when they are deprived of all other mixture, or when there is nothing but the metallic oxyd. In this state they act with much violence on animal substances, and burn or corrode them. In this state they are used by surgeons to destroy a portion of skin for the purpose of forming an issue.

ALKALI, MILD. Alkalis are rendered mild by the addition of carbonic acid or fixed air, for which they have great affinity; and joined with which, they are always obtained at their first preparation by the burning of vegetables. The carbonic acid deprives them in a great measure of their acrimony, though it does not totally remove it: the carbonic acid being a mild substance, and easily separated from the alkali, the taste and some other properties of the alkali are still preponderant; but by careful dilution, the carbonates may be given internally, and may be employed in washing the skin and other animal substances, without fear of corrosion. What are sold in the shops by the names of potashes and soda, are the carbonates of potash and soda.

ALKALOIDS. The active properties of many vegetables are found to reside in certain substances possessed of many of the qualities of alkalis, to which, therefore, the name of alkaloids has been given. Examples of these alkaloids are found in morphia extracted from opium, quinine from bark, and various others.

ALKANET ROOT, *Anchusa Tinctoria*. A root used in pharmacy to impart a red colour to oils and unctuous substances. It is not now used for any medical purpose.

ALLOY. When a baser metal is mixed with the purer metals, as silver or gold, an alloy is said to be formed. Or when any number of metals are melted into one mass, they are said to be alloys; unless when mercury is an ingredient, and the compound is then called an amalgam.

ALLSPICE, PIMENTO, JAMAICA PEPPER, *Myrtus Pimenta*. It is a warm, aromatic stimulant, and much used in dressing food. It is used in medicine as a stimulant, to disguise the taste of other drugs, and to make them sit easily on the stomach. Its smell and taste resemble a mixture of cinnamon, cloves, and nutmegs; hence it has received the name of *allspice*.

ALMONDS, *Amygdalus Communis*. The kernel or fruit of the almond tree; a tree resembling a peach, which originally came from Syria and Barbary, but is now much cultivated in the south of Europe. There are two kinds of almonds, the sweet and the bitter; it is said that the eye can discern no difference between the kernels of the two kinds, nor between the tree which produces them; and that the same tree by culture has been made to produce both. Almonds are covered with a thin, brown skin; they are apt to become rancid by keeping. Sweet almonds are pretty much used as an article of food, but they are difficult of digestion, and afford little nourishment. Bitter almonds are much used in cookery, to give flavour to puddings and other articles of food; but in some constitutions, a small quantity occasions a troublesome nettle-rash, and has even been said to be poisonous to dogs and some other animals. Whatever acrimony they possess, is considered to be owing to a substance called Prussic acid, which has been detected in them; it is a virulent poison, and on it the poisonous qualities of the cherry-laurel, and some other vegetables, depend. An oil is obtained from almonds by pressure, and by boiling them in water, when it

separates, and swims on the surface. When almonds are beat up with watery fluids, they form a milky softening liquor called an emulsion, which is very useful in diseases where there is acrimony of the fluids, as in tickling coughs, and heat of urine. Two English pints of the emulsion of almonds may be taken daily. When camphor is wished to be given, it may be formed into an emulsion with almonds, according to the following prescription: Take of camphor one scruple; sweet almonds blanched, two drachms; double refined sugar, one drachm; water, six ounces; beat the substances together in a stone mortar, gradually pouring on them the water; then strain off the liquor. Of this a table-spoonful may be given, and may be repeated, according to the quantity of camphor we wish to be taken.

ALMONDS OF THE EAR. Certain glands situated at the back part of the mouth, named by anatomists the tonsils, and by common people, from their shape, the almonds of the ear. These glands are very subject to swelling from cold, producing a disease called the quinsy, or inflammatory sore throat. As the almonds of the ear are pressed upon by the action of swallowing, great pain is produced on them, when in a state of inflammation, even by swallowing the spittle, or liquids. Whenever a person is threatened with this complaint, strong gargles should be used, made of vinegar and water, or sulphuric acid and water, or hartshorn and water, or strong spirits. A gargle applied in time often prevents the disease from becoming violent. At the same time, the patient should take some cooling purgative, avoid exposure to cold, and apply a mixture of eight parts of olive oil, and one part of hartshorn, to the outside of the throat, with an additional covering of flannel. In many scrofulous constitutions these glands are constantly larger than natural, and are very apt to become inflamed by exposure to cold and moist air. Frequent strong gargles are necessary in such. The decoction of oak bark, with the addition of a little tincture of myrrh, forms a very good gargle. For the consequences of inflammation in those parts, *See* QUINSY *and* SORE THROAT.

ALOES, *Aloe Spicata.* A well known and very useful purgative medicine. It is a gum resin, or substance soluble in diluted spirits, and is obtained from a plant which grows in Barbadoes, at the Cape of Good Hope, and at the Island of Socotra in the Indian Ocean. It is prepared by pulling off the leaves, from which the juice is squeezed out, and afterwards boiled and skimmed. Its taste is intensely bitter and disagreeable, though it has an aromatic flavour. Aloes is a warm, stimulating purgative; and it acts chiefly on the large intestines, seldom producing any watery or fluid stools, but merely promoting the easy evacuation of the bowels. It generally agrees well with the stomach, and by its bitterness promotes appetite and digestion; and it is remarkable with regard to it, that it operates as beneficially in a small as in a large dose; one or two grains, says Dr. Cullen, will produce one considerable stool, and twenty grains will do no more; except it be, in the last dose, the operation will be attended with gripes. Aloes is one of the best remedies against habitual costiveness: it is extensively employed by those of studious, sedentary habits, and by females of all classes of society; and from its very general use, and from its certainly acting chiefly on the great intestines, it is not wonderful that many instances are known of its seeming to produce piles and other irritations of the lower belly and neighbouring parts. It will have this effect when frequently used; and therefore, however useful aloes may be as a mild and certain evacuant, it will be right for those whose constitutions require frequent purgatives, to interpose occasionally a dose of neutral salts, or compound powder of jalap, or infusion of tamarinds with senna. In indolent habits, where costiveness is accompanied by languid circulation, loss of appetite, disinclination to exertion of mind

or body, fretfulness of temper, and those symptoms which the unlearned understand so well by the term *nervous*, aloes, in some of its various combinations, is one of the most valuable medicines we possess. The cases in which aloetics should be avoided are those of persons subject to piles, to discharges of blood, and where inflammation or irritation exists in the bowels. From their action on the uterine system, they are used in cases where the monthly discharge is obstructed; and for a similar reason, should be used with caution in the state of pregnancy. The dose of aloes is from three to fifteen grains, but from its disagreeable and bitter flavour it is never given alone, but combined with aromatics or bitters, or made into pills, or dissolved in wine or proof spirits. Tincture of aloes may be given to the dose of half an ounce, or an ounce, and aloetic wine is a good purgative in doses of from one to two ounces.

The following are some of the most useful forms in which aloes may be taken, with the particular purposes, and times of the day proper for each. They are kept in the shops of apothecaries, under the name prefixed to each of them.

Aloetic pills, for costiveness without any peculiarity of symptoms: two pills for a dose at bed-time.

Aloetic pills with assafetida, for hysterical affections, with costiveness and flatulence: two pills every second night at bed-time.

Aloetic pills with colocynth, commonly called *colocynth pills*, when the simple aloetic pills are found too weak: two pills or three at bed-time.

Pills of Aloes with Myrrh, or *Pilulæ Rufi*, in female constitutions, in the full complexion and sluggish habits attendant on the suppression or non-appearance of the monthly discharge: two pills or three may be taken twice or thrice a-day.

Rhubarb Pills, or *Stomachic Pills;* these contain a small portion of aloes; they are useful for strengthening the stomach, and gently opening the bowels, and may be taken to the extent of two pills every forenoon, and two in the evening.

The far-famed *Anderson's pills* consist of Barbadoes aloes, with a proportion of jalap and oil of aniseed: one or two for a dose.

There is another kind of pills, which seem a slight variation of the pills called *Dinner Pills*, or *Lady Webster's*, or *Lady Crespigny's pills*, made of equal parts of rhubarb, aloes, and mastich. This last ingredient is not of much virtue in itself, but makes the solution of the others in the bowels gradual and equal. The dose of these pills, which have not received any particular name, is two or three, and the time for taking them is immediately before dinner; they then mix with the food, prevent flatulency, and are usually found to operate next morning after breakfast.

ALTERATIVES. Medicines intended gradually and imperceptibly to improve the constitution in some of its functions, without any remarkable evacuation. Alteratives are employed in diseased states of the fluids, in derangements of the digestive organs, and affections of the skin. Doses of rhubarb, so small as not to purge, mineral waters, or imitations of them, drank for a length of time, may be considered as alteratives. The medicine most frequently used for this purpose is mercury, in the form of calomel, or the blue pill, or combined with a preparation of antimony, as in Plummer's pill. When calomel is given as an alterative, it should be in the form of pills, containing one grain of calomel; one of which may be given twice a-day, taking care that the salivating effects of mercury be not induced. The dose of rhubarb, for a similar purpose, is about five grains a-day, either alone or combined with magnesia and ginger. Iron may also be given: one grain of the sulphate, or fifteen drops of what is called tincture of steel may be taken twice a-day. Plummer's pills may be given in the dose of two pills every night at bed-time. All these medicines will do but little, if the constitution is not

at the same time improved by the judicious employment of proper diet, air, and exercise.

ALUM. A salt composed of sulphuric acid, and a peculiar earth abundant in clay, with a quantity of potassa. It has a sweetish but powerfully astringent taste; and from its astringent qualities it is reckoned useful in restraining discharges of blood, or immoderate secretions; but it is highly dangerous to use large doses of it in fluxes from the intestines. When it is thought advisable to use alum in discharges of blood, from ten to fifteen grains may be given, and repeated every hour or half hour, for four or five times; but there are few bleedings where it would be safe to trust to this; and in every case attentive discrimination must be employed to ascertain the nature and cause of the bleeding. Burnt alum is used externally in the form of powder as a mild caustic, to prevent the growth of proud flesh; it is also used in solution as a wash to the skin, and in some cases as a wash for the eye. A styptic wash, of which alum is a principal ingredient, is used for stopping bleedings at the nose; and for this purpose, cloths or pieces of spunge steeped in the liquor are to be applied to the part. By agitating a grain of alum with the white of an egg, a curd is formed, and this is useful in some cases of inflamed eyes, being applied to the eyelids between two folds of fine linen. Bakers have been suspected of mixing alum with their flour, to increase the whiteness of their bread. Dr. Paris says, it is certain that the inferior kinds of flour will not make bread of sufficient whiteness to please the eye of the fastidious citizen, without the addition of a proportion of alum.

It has been also found, that unless this salt be introduced into the flour, the loaves stick together in the oven. It has been said that the smallest quantity that can be employed for these purposes, is from three to four ounces to two hundred and forty pounds of flour, that is eight grains to the pound. or thirty-six to the quartern loaf. Even a small portion of alum introduced into the stomach will be hurtful to those troubled with indigestion, and such persons should endeavour to get their bread made without alum.

ALUMINA. Pure clay, or the earthy base of alum, from which it derives its name. It is not used in medicine; and for its chemical properties, and its application to the arts, especially pottery, we refer to the books which treat of chemistry and manufactures.

AMALGAM. A composition of mercury with any other metal.

AMAUROSIS. *See* BLINDNESS *or* GUTTA SERENA.

AMBER. A solid brittle bituminous substance, of a white, yellow, or brown colour, sometimes opaque, sometimes transparent; often containing in its substance straws, flies, or other insects, which additions prove it to have once been fluid. It sends out an agreeable smell when heated or rubbed; and it also has the power of attracting light substances when heated; and as the Latin name for amber is *electrum*, it has had the honour of giving name to the wondrous power of electricity, one of the phenomena of which is the attraction of light substances by amber, glass, sealing-wax, and some other bodies. Amber is found floating on the shores of the Baltic, and in Polish Prussia, either on the sea shore, or under ground, at about the depth of 100 feet, resting on wood-coal. Amber itself is not used in medicine, but its oil is.

AMBER, OIL OF. By distilling amber, an oil is obtained, of a pungent acrid taste, and of a peculiar, but not very unpleasant odour. It is seldom used except as a liniment; and it is one of the ingredients in an empirical remedy called Roche's Embrocation, much used in hooping-cough. Either that or the following may be rubbed on the chest three times a-day: Take equal parts of tincture of camphor, laudanum, and oil of amber, and form a liniment.

AMMONIA. The pungent volatile substance known by the name of hartshorn.

Ammonia in its pure state is a gas or permanently elastic fluid, which may be separated from sal-ammoniac by mixing quick lime with it and distilling, when the ammoniacal gas rises. It must be passed through mercury, as water rapidly absorbs it. It is composed of three parts of hydrogen and one of azote. Ammonia is usually kept in combination with water, and this solution, commonly called spirit of hartshorn, agrees in its properties with the other alkalis, neutralizing acids, forming soap, and changing the vegetable blues to green. Ammonia, in two at least of its combinations, affords the curious example of two aerial bodies forming a solid when they meet. The muriatic acid gas, and the ammoniacal gas, two invisible transparent fluids, when brought within the sphere of each other's influence, form the solid white substance sal-ammoniac. Carbonate of ammonia also is the production of a gaseous acid, and a gaseous alkali. It is in the form of carbonate or sub-carbonate, that we find it most convenient to employ ammonia for medicinal purposes, as the peculiar properties of ammonia are so little diminished by the addition of the carbonic acid, that it may be disregarded.

Ammonia is one of the most useful stimulants we possess. Ammonia in water, or the carbonate of ammonia, is useful for arousing the suspended faculties in cases of fainting. It is often used with good effect to stop the fits in hysterical women, and it is applied also, though with less certainty of success, in convulsions or epilepsy; and in cases where spirits, wine, or internal stimulants would be dangerous, ammonia to the nose in the form of gas, may be beneficially employed.

Ammonia is a powerful corrector of acidity in the stomach, even more so than the fixed alkalis, and is useful in those affections of the stomach which are the consequences of irregular living. In hoarseness, proceeding from a relaxed state of the throat, it is highly useful. It may be taken dropped into syrup, to the amount of ten drops four times a-day. When sore throat is threatened, a gargle of properly diluted water of ammonia in the proportion of one ounce of ammonia to six of pure water, will often prevent the inflammation from proceeding far; and the same gargle with an additional ounce or two of water may be used in the relaxed and swelled state of the tonsils, which some people are subject to in damp cold weather. A mixture of hartshorn and oil is a good embrocation in sore throat, and in other cases where a heating liniment is wanted, as in palsy, rheumatism, and internal pains. The dose for internal exhibition is from five to ten drops of the undiluted solution of hartshorn, called *aqua ammoniæ*, or from five to eight grains of the sub-carbonate made into pills. The ammonia may be increased or diminished according to the degree of stimulus required. In some cases of headach, the *alcohol ammoniatum aromaticum*, or ammonia dissolved in spirits, with a proportion of volatile essential oils, is beneficial, in the dose of from ten to forty drops, three or four times a-day. The beautiful blue colour in the large jars exhibited in the shops of druggists is produced by adding a quantity of liquid ammonia to a solution of blue vitriol (sulphate of copper) in water.

AMMONIACUM. The name of a gum used in medicine as a stimulating expectorant, either alone, or combined with squill. In the coughs to which aged persons are sometimes subject, unattended by inflammatory action, but with some degree of spasm, and the secretion of much tough mucus, difficult to bring up, ten grains of ammoniacum three times a-day seem to have proved of service in allaying the spasm, and causing the mucous matter to be easily spit up. For a similar purpose, the mixture of ammoniacum made by rubbing the gum with water, may be used in doses of from half an ounce to an ounce; and the same may be given to females in whom it is wished to increase the activity of the uterine system. In long and obstinate colics, pro-

ceeding from viscid matter lodged in the intestines, ammoniacum alone, or combined with rhubarb, has produced happy effects. Six grains with ten of rhubarb are a proper dose. The squill pill, which is so useful an expectorant, has ammoniacum as one of its ingredients. It would be as well if this gum had another name, not so similar to ammonia, with which it has no affinity or resemblance.

AMMONIURET OF COPPER is a subsulphate of oxide of copper and ammonia. It is tonic and antispasmodic. It has been employed in epilepsy and in St. Vitus's dance, after a course of purgatives. It may be formed into pills with crumb of bread, each pill containing half a grain, beginning with one pill a-day, and gradually increasing the dose to four pills twice a-day. Like many other substances extolled for the cure of epilepsy, it has often disappointed expectation.

AMNIOS. The soft internal membrane which surrounds the fœtus. It is very thin in the early stage of pregnancy, but acquires considerable strength in the latter months. It contains a liquor in which the embryo floats, suspended by the navel string. The coming off of this liquor during labour, is known by the name of the discharge or breaking of the waters.

AMPUTATION. A surgical operation for the removal of a limb or other part of the body. Before the great improvements made by modern surgeons in this very terrible operation, many lives must have been lost by the ignorance of practitioners, as in ancient times the art of stopping bleedings was unknown, and consequently many diseases and accidents which we now can cure and remedy, must have been left to nature. It is the same in ignorant countries to this day: there are no wooden legs in China. On this subject there are two points at least for consideration, whether it is best to leave the case to nature and not to amputate, and what is the best time to do it. Every case must be judged on its own merits; and what can be said here must be very general. There are various diseases and accidents which would infallibly destroy life if amputation were not performed, and which would probably do well if the patient submitted to it. Such are white swellings of the joints, scrofulous ulcers, fungus hæmatodes, or soft cancer, &c. When a heavy weight has crushed the bones of a limb, when there has been much tearing of the muscles and soft parts, the danger from the accident greatly exceeds the danger from an operation; and this should be performed as soon as possible after the shock of the accident has gone off; for if we wait too long, the constitutional symptoms will come on, and fever will run so high, that it will be hazardous to increase them by the additional irritating effects of an operation. When this favourable period has been neglected, attention must be paid to moderate the violent action of the system by bleeding, purging, and the removal of all causes of excitement; and then to watch the favourable opportunity of taking off the limb. Without entering into minute details of the manner of amputating any particular limb or member, for which we refer to books of surgery, we shall state generally what the surgeon has to attend to. In amputating a limb, he must do it at a place sufficiently distant from the disease or injury which has occasioned the necessity of the operation, and at the same time, he must leave as much of the sound part as is consistent with the future health and convenience of the patient. If there is to be a stump with a bone in the centre, he is to take care to manage his incisions so as to leave enough of flesh to cover it completely, and over all, sufficient skin to cover this again; and for this purpose, it is to be remembered, that the skin retracts more than the flesh, and the flesh leaves the bone; therefore if a cut were made down to the bone at once, the bone would project in the middle, the flesh would be a little behind it, and the skin would be shortest of

all, rendering it impossible to cover the bone. The skin therefore must be cut through first, and allowed to retract, then the muscles should be cut through and separated from the bone, and last of all the bone sawn through. By this means the bone is completely covered. By other methods of incision, called by surgeons the flap operation, a cushion of flesh is left to cover the end of the bone. The cut surfaces of the stump are then brought to touch each other, and retained in contact by adhesive plaster and bandages; and it cannot be noticed without admiration, how soon surfaces unnaturally denuded, and brought to touch each other, become united and healthy till the end of a long life. The contrivances for preventing the loss of blood during the operation, are pressure on the large trunks of the arteries by the instrument called a tourniquet, or by the hands of proper assistants. The open mouths of the larger vessels are secured by putting ligatures around them. Care must be taken after amputation to prevent fever, to watch for some time lest bleeding should occur, and attend to the dressing of the stump.

ANALYSIS. The art of decomposing or separating bodies into their component parts. Thus, when a mineral water is examined by a chemist to discover what different bodies are dissolved in it, he is said to *analyse* the water; or when he separates the sulphuric acid from the magnesia with which it is combined in Epsom salt, he *analyses* it. The term *analysis* includes every kind of separation, whether by heat, by mixture, by galvanism, or by any other means. The reverse of this is *synthesis*, or joining bodies together.

ANASARCA. A species of dropsy where the watery fluid accumulates in the cellular substance, or between the skin and the flesh in different parts of the body. It is that species of dropsy which is generally meant when the term is employed without addition in common discourse; but it is usually only a symptom and evidence of some more extensive disease. *See* DROPSY.

ANATOMY. The art of exhibiting the structure of organized bodies, either by dissection, injection, boiling or other modes of preparation; or the knowledge acquired by any of these means.

The importance of human anatomy as the basis of all true physiology, and of the rational exercise of physic and surgery, is now universally acknowledged. The ancients having few opportunities of examining the structure of the human body, made comparatively little progress in the knowledge of its functions; and a few facts obtained by the casual inspection of wounded patients, with some analogies gathered from the internal parts of brutes which had been killed in sacrifice or for food, constituted the sum of their anatomical knowledge. Their opinions of the functions of living animals were still more contemptible. Of the uses of the heart and arteries, the lungs, and the liver, they were totally ignorant; and the grand discoveries of the circulation of the blood, the absorption of the chyle and lymph, the functions of the stomach, the liver, and the other viscera employed in digestion or nutrition, are entirely the property of the skilful and patient anatomists of modern times. Of the absolute, the indispensable necessity of the most minute knowledge of anatomy to the operating surgeon, it is superfluous to speak. By the exact acquaintance which surgeons have now acquired of the relative position of the various organs, whether muscles, nerves or blood-vessels, they are enabled successfully to perform operations, which formerly would have been regarded as utterly impracticable; and to cure diseases which in ancient times were allowed to wear out the patient in torture and putrefaction.

It is greatly to be regretted, that any obstacles or discouragements to the acquisition of anatomical knowledge should exist in any quarter. There is undoubtedly an instinctive horror at mutilating the erect form, which was so lately the

residence of an intelligent and an immortal spirit; and few could contemplate without the deepest anguish the possibility of this being done to the person of those who had nourished their infancy and protected their childhood, or in whose countenance they were accustomed to discern the benevolent feelings of their heart. Yet the instincts of nature must give way to the calls of duty and necessity. Those who for the acquisition of a useful and necessary profession, devote themselves for a time to the disgusting exercise of dissection, should meet with no obstruction from those who are to benefit by their skill and attainments. If persons in the better ranks of life are afflicted with diseases which require the knife of the surgeon, they very properly demand the assistance of the best that can be procured; but they should remember that they cannot have a skilful surgeon who has not dissected many bodies. This should not be forgotten by judges, magistrates, and other persons in power; who by the influence of their character and attainments, should temper and remove the prejudices of the people, instead of inflaming them. Every year there are numerous judicial investigations, on the result of which many lives depend. In trials for suspected murder, and in coroners' inquests, almost the whole affair depends on the evidence of medical men, who are called upon to state their opinion as to the cause of death; and who can never, with the smallest accuracy, describe what is the consequence of violence, poison, or disease in any part of the body, unless, by the frequent practice of dissection, they have been familiar with the appearance of the same part in its usual unaltered state. Some knowledge of the human body, and some information on the importance of anatomy should be communicated in all Mechanics' Institutions; and the labouring classes should be impressed with a proper sense of the importance of good surgeons to them in particular A rich man when sick or disabled can command many alleviations; but to those who must live by the strength of their limbs, and the dexterity of their hands, health and vigour are equivalent to a fortune. Sensible and well-informed masters should take proper opportunities of impressing on their workmen the utility and necessity of human dissections. When the fall of a scaffold precipitates a number of masons to the ground—when the bursting of a steam-engine throws down the walls of a manufactory, and mangles many of the workmen, or scatters the destructive fragments of a vessel among the passengers and crew—when the carpenter or ship-builder cuts an artery with his tools, nothing but the assistance of a skilful surgeon can give a chance of recovery, and preserve the life and limbs of the wounded for the support of themselves and their dependent families. No plates, no models, no descriptions can convey the knowledge necessary to entitle a man to make the smallest pretensions to operate on the diseased living body. There are means of supplying the materials for a ckirurgical education, without imparting a shock to the feelings of any, and without demoralizing the character of those who are employed; and we confidently trust that the liberality and good sense of the legislature, will take out of the way those obstructions to the attainment of surgical knowledge, which have been long productive, not only of inconvenience, but of profligacy and crime.

ANATOMY, Comparative. The knowledge of the structure of the bodies, or of the functions of other living creatures besides man. The great functions which are common to all living and organized beings, can be known only by the diligent cultivation of comparative anatomy. By this we see what powers or operations of nature are necessary to the existence of animal life, how respiration is performed, and how digestion; how some senses are perfect in some animals, and in others defective, but all conducive to the comfort of the animal in whom

they are found. We are thus enabled to distinguish what is essential to animal life, and what is extrinsic or accidental; and in many cases we apply to the use of man, for the cure of diseases and the improvement of his powers, the knowledge we acquire by observations and experiments made on the lower animals.

ANCHOVIES. Little fish obtained in great numbers near Leghorn, which are prepared for sale, by salting and pickling. Their principal use is a sauce for seasoning other food.

ANCHYLOSIS. A stiff joint, most frequently owing to the smooth gristly covering which tips the ends of bones destined to move on each other, being eroded by disease, and the bones in consequence growing together. This may arise from inflammation, and other diseased actions, by which the cartilages at the ends of contiguous bones are destroyed; and the bony parts grow together. A stiff joint may also be produced by the thickening and adhesion of tendinous parts, but this is not the true anchylosis. When this affection is completed, it is hardly possible to cure it; but it is to be prevented by removing inflammation and other exciting causes; and in some cases, it is to be considered as a favourable termination of what would otherwise have produced a wasting discharge, or have required amputation, as in white swellings of the knee joint. Stiff joints very frequently occur in old rheumatic and gouty cases. When the stiffness is not complete, attempts may be made by friction with oily and stimulant matters, as camphorated oil, oil of turpentine, a strong brine, or neats' foot oil. Water, either warm or cold, poured from a height upon the affected joint is sometimes successful.

ANEURISM signifies a soft swelling, having a pulsating motion corresponding to the beating of the arteries. To the ignorant observer, it does not seem a very formidable thing to be afflicted with a small colourless swelling, free from pain, and not hindering the motion or the functions of any part; but the surgeon knows that it is the commencement of a process, which, unless counteracted by the most skilful treatment, must almost infallibly terminate in the destruction of the unhappy sufferer. He knows that this tumour proceeds from a diseased artery, that the unremitting activity of arteries presents obstacles to the recovery, which unassisted nature can seldom overcome; that the tumour must continue to exist, nay, to increase; till, finding its way through the skin and other coverings, the blood bursts forth, and thus ends the life of the patient.

Arteries have three coats, a villous or smooth coat along which the blood moves; a muscular coat, and outermost of all, a cellular coat. It may happen that the whole of the three coats may be enlarged, and the calibre of the artery in creased; this is considered by surgical writers as the only *true* aneurism; but it more frequently happens that from some disease of the inner coat, a piece is ulcerated and absorbed from it, and the constant force of the blood pushes out the muscular coat, and leaves nothing but the cellular coat to contain the blood. This more common form of the disease is called *false* aneurism.

This disease of an artery may be in such a situation as to present no external tumour to give any alarm; it may be within the cavity of the chest or of the belly; and the same fatal progress will go on, till the blood bursting into some or these cavities, will be as much out of its due place, and as fatally lost, as if it had been spilt on the ground. There are some situations where aneurisms occur more frequently than others, and from their situation they derive their names. A few of these shall be enumerated: 1. The *popliteal aneurism* is that which occurs in the ham, and is one of the most frequent that occurs. 2. The *carotid* in the neck. 3. The *axillary* in the armpit. 4. The *subclavian* in the artery under the collar bone. 5. Internal aneu-

risms of the *aorta*, the large arterial trunk issuing from the heart, frequently occur.

Cure of Aneurism. Several methods have been proposed for the cure of aneurism, some constitutional and others local: the principal one acting on the general system is that of extreme low living, which is said to have succeeded in some instances. The only way in which it could act must have been by diminishing the quantity and force of the blood, and so allowing the diseased part of the artery to heal; but it has not often been successful. It is now universally allowed that a cure of aneurism is rarely to be expected, unless by some means or other the canal of the artery be obliterated in its course nearer the heart than the tumour. Sometimes this takes place spontaneously, from the tumour occasioning a pressure in so favourable a part of the artery, that it occasions an adherence of its sides; but we do not know when to expect this, and the fewness of the instances in which it has happened, does not warrant our waiting for it in any case. We must put in practice the methods which the well directed observation of modern surgery has contrived; and the best way of effecting the obliteration of the canal of the artery, is by tying a fine ligature tightly round the vessel. The effect of this is to cut through the two inner coats as if a knife had done it; inflammation is excited, a clear fluid called coagulable lymph is thrown out, and by this means a plug is formed which prevents the blood from going any further along that portion of the artery. The pulsation of the tumour is immediately stopped; the limb for a short period becomes colder, but in no long time regains its heat, or increases it. The continual action of the heart and arteries enlarges the smaller collateral branches, and this enlargement continually going on, renders them capable of supplying the limb with blood. The tumour gradually diminishes by the action of the absorbent vessels, which remove out of the system what is decayed or useless, so that it gives no farther trouble.

When an aneurism is out of the reach of an operation, life may be prolonged by occasional bleeding, a spare diet, and avoiding every thing that would too much stimulate the action of the heart and arteries.

ANEURISM, VARICOSE. *See* BLOODLETTING, ACCIDENTS FROM.

ANGELICA, *Angelica archangelica.* A biennial umbelliferous plant, all the parts of which, especially the roots, have a fragrant aromatic smell, and a pleasant bitter warm taste. It is little used in medicine, but a sweet-meat is made of the candied stalks and root by the confectioners.

ANGINA PECTORIS. An acute pain at the lower end of the breast bone, inclining towards the left side, accompanied with great uneasiness.

Symptoms. The leading symptoms of the disease are violent palpitations of the heart; difficulty of breathing, and a feeling as of suffocation. In the first stage of the disorder, the pain is felt chiefly after some exertion, as going up stairs, or up a hill, or walking quickly, particularly when the stomach is full; but in more advanced stages, slighter exertions are sufficient to cause a paroxysm of pain, as walking, riding, coughing, sneezing, or speaking; passions of the mind also have the same tendency. In the first stage, the uneasy and threatening symptoms go off soon; but afterwards they are longer and more distressing, and give the patient the fear of immediate dissolution. During the fit, the pulse is feeble and irregular, the face pale, and covered with a cold sweat, and the patient appears as if in a fit of apoplexy, without the power of sense or motion. The disease makes occasional attacks for years, and at last suddenly puts a period to the patient's life.

Causes. Angina Pectoris is believed by some to be chiefly owing to an ossified state of the vessels which nourish the heart, by which its powers are weakened, and it is rendered unable to empty itself

properly; so that, upon any exertion of body or mind, by which the blood is sent back to the heart more quickly than usual, that organ is unable to send it through the lungs, and hence the distressful symptoms above noted. But the symptoms of the disease and the examinations of bodies after death scarcely warrant this conclusion, as this state of the arteries has not been found even in very severe cases; and the manner in which it attacks and goes off by paroxysms, does not seem to be dependent on so permanent a cause as ossification. It rather appears to be of a spasmodic or convulsive nature, as is shown by the manner of treatment, which is sometimes successful by stimulants and antispasmodics. It is found to attack chiefly those who are of the make which has been supposed most liable to apoplexy, viz. those with large heads and short necks, and who lead a sedentary and inactive life, who are disposed to be corpulent, or who are of gouty habits. It seldom attacks persons under the age of fifty.

Treatment. The cure and prevention consists in diminishing the quantity of blood in the system, by small bleedings and spare diet, and avoiding every thing that would quicken the circulation. In the fit, stimulants must be very cautiously employed, the head and temples are to be bathed with cold water and vinegar; a slight bleeding should be used to relieve the overloaded heart, gentle pressure employed on the left side to empty the heart; and on the appearance of returning respiration, ammonia is to be applied to the nose. The use of wine or spirits seems rather a hazardous practice. The disease has been mitigated by forming issues in some part of the body. Also by blisters, or tartar emetic ointment applied to the chest.

Those who are subject to this disease, should carefully shun all mental irritation, and every gust of passion that would hurry the circulation. Moderate exercise should be daily taken in the open air, but no violent exertion should be ventured on; and all attempts at going up a rising ground should be avoided, or if made, it should be with the utmost care. The food should be plain and easily digestible, such as is not liable to occasion flatulence. Fermented liquors are improper. On any approach to fulness of blood, animal food should be withdrawn from the diet; and mild saline purgatives frequently taken. A perpetual blister or other irritation in the region of the heart is useful, and warm bathing to the feet and legs may help still further to prevent the undue flow to the other parts of the body.

ANGUSTURA BARK is obtained from the *Cusparia febrifuga* of Linnæus, the *Bonplandia trifoliata* of the modern botanists. It is stimulant and tonic to the organs of digestion, but does not cure intermittents, as was at one time believed. It increases the appetite for food, and does not oppress the stomach as the Peruvian bark is apt to do. It is given in powder, in doses of from five to twenty grains, or in infusion, one drachm to four ounces of water; or in tincture, in the dose of one or two drachms, or in the form of watery extract.

There is a substance called fine angustura, which is the bark of a different plant, the *Brucea antidysenterica*, and contains an active poison. Its virulence depends on an alkaloid body, to which its discoverers, Pelletan and Caventou, have given the name of Brucea. It is said to produce tetanus, without affecting the intellectual faculties. It is characterized by having its outer bark covered with a matter which has the appearance of rust of iron.

ANIMAL. An organized substance endowed with the power of voluntary motion, of sensation, and the power of reproducing its like.

ANIMAL FOOD is the aliment procured from the various classes of living beings. Under the article ALIMENT we have given a very general account of the principal animal substances used as food; and it only remains here to notice some particulars in which an animal and vegetable diet differ in their effects on the human

body; and to state some cases in which the use of animal food is improper. Though milk, strictly speaking, is an animal substance, we for the present exclude it from our consideration, but mean not to exclude cheese, which is derived from it. Animal food produces a considerable degree of excitement during its digestion, with much irritation and heat of the system. It is highly nutritive, and when not tempered with a due mixture of acescent vegetables, it oppresses and overfeeds those who use it, especially if they be of sedentary habits; and when acute diseases occur in such persons, they will probably put on a putrid form. An immoderate use of animal food predisposes to sea scurvy and cutaneous diseases. Hence the impropriety of indulging children with much butter, cheese, and butcher meat; and hence the necessity of a very copious allowance of vegetables, especially in the summer months, and in warm climates. Young persons, and such as use abundant exercise, are least injured by a free use of animal food; those who have attained their full growth require less of it, and old persons should use it still more sparingly.

The prohibition of animal food in every shape, whether solid food or soups, is one great particular of the antiphlogistic regimen. Hence it is absolutely forbidden in the early and acute stages of fevers, inflammations, apoplexy, epilepsy, smallpox, measles, and scarlet fever. It is very difficult to persuade patients or their friends of the importance of attending to this particular. Nothing is more common than to hear lamentations of the total loss of appetite, and of the patient being able to take nothing but beef-tea, not considering that this is really taking a great deal of the most nutritious and stimulating animal food. In some states of the system, animal food is as useful as medicine; some kinds of stomach complaints demand its almost exclusive use; and in diabetes, the cure has been attempted not only by excluding vegetables, but by employing porksteaks, and other animal matters in a state of rancidity.

ANIMAL FUNCTIONS. Certain actions performed in the animal body not immediately necessary to life, but which are peculiar to living or animated bodies. These are the senses and voluntary motion. Sleep consists in the suspension of these.

ANIMAL HEAT. A certain temperature is necessary for the healthy action of all living bodies, whether animal or vegetable. In very low temperatures, all vegetable life dies; but in most situations, animals have the wonderful power of keeping up a proper degree of heat where all other things would be frozen into inactivity; and in the burning sultry climates they can reduce their temperature to a degree fitted for their comfortable existence. It has been an interesting inquiry, on what this power of equalizing the temperature depends. The following is the explanation most generally acquiesced in by philosophers, though the late experiments of Mr. Brodie of London have rendered it less satisfactory than it was formerly considered. It has been long known that those animals which do not breathe, have a temperature very little superior to the medium in which they live; the temperature of fishes and insects is not much above that of the water. On the other hand, man, and the quadrupeds who breathe, have a temperature considerably higher than the atmosphere; the usual temperature of the human body is 98° of Fahrenheit's thermometer. Birds, which breathe a greater proportional quantity of air in a given time than man, have a temperature equal to 103° or 104°. It has been proved that the temperature of all animals is proportional to the quantity of air which they breathe in a given time. These facts seem to demonstrate that the heat of animals depends upon respiration. How this does so, Dr. Crawford attempted to explain in the following manner:—The oxygen gas of the air we breathe, combines in the lungs with a portion of car-

bon emitted by the blood. During this combination, the oxygen gives out a great quantity of caloric, or the matter of heat, with which it had been combined; and this heat is not only sufficient to support the temperature of the body, but also to carry off the new formed water in the state of vapour, and to raise considerably the temperature of the air inspired. According to Dr. Crawford, the whole heat necessary to keep up the temperature of the body is evolved in the lungs; but if this were true, the heat ought to be greatest in the lungs, and to diminish in proportion to the distance from them; but this is not true. To get rid of this objection, Dr. Crawford says, that as it requires a greater quantity of heat to raise arterial blood to a certain degree of heat than it does to raise venous blood to the same degree, the venous blood being changed into arterial blood in the lungs, much of the new caloric evolved in the lungs is necessary to keep up the temperature in the arterial blood; and, therefore, the temperature in the lungs is not greater than in the rest of the body. In the course of the circulation through the body, arterial blood is constantly in the act of being converted into venous; and having less capacity for retaining heat than the venous, it is given out as it passes along the system, and so the temperature of the extreme parts of the body does not diminish. But every theory, however plausible, and however pleasing to the imagination, must give way to facts. The question now is not, does it explain the phenomena? but, is it founded on facts? Dr. John Davy has shown that the difference between arterial and venous blood in the heat they require to raise them to the same temperature, is almost imperceptible, or at least inadequate to the explanation given by means of it; and the French chemists have shown that the carbonic acid gas has no heat to spare for the lungs, but needs it all for its own gaseous existence. By some experiments of Mr. Brodie, he found, that by artificial respiration in dead animals whose brain had been removed, the usual proportion of carbonic acid gas is formed; but the heat diminishes more rapidly than in a dead animal in which artificial respiration is not kept up. Dr. Thomson (System of Chemistry) thinks those experiments have entirely destroyed the foundations on which Dr. Crawford's theory was built. But he thinks also, that a connexion is established between respiration and heat, by the fact that animals which respire regularly are hot-blooded, while amphibious animals and fishes are cold-blooded.

ANIMAL KINGDOM. The whole assemblage of animal beings, as distinguished from the vegetable and mineral kingdoms.

ANIMATION, SUSPENDED. *See* DROWNING *and* RESUSCITATION.

ANISE. *See* DILL.

ANODYNES. Medicines which relieve pain. Another name by which they are known is *narcotics*, from a Greek word, which signifies stupor, which may be considered as the generic term; and the various narcotics have received specific names, according to the effect most strikingly produced by them. If they induce sleep, they are called *hypnotics*, or *soporifics*; if they diminish the rapidity of the circulation, or the activity of the general system, they are called *sedatives*; and from the circumstance of being used to diminish the sensibility to pain, they are called *anodynes*. The substances possessed of narcotic, and, therefore, of anodyne properties, are very numerous. The following are some of them; and under each separate article we shall state its properties, and the mode of administering it: Opium, henbane, hemlock, camphor, fox-glove, tobacco, stramonium. Of these, one of the most useful is opium, in some of its various shapes. It may be given in a very simple form, as a draught formed of twenty-five drops of the tincture, commonly called *laudanum*, with cinnamon or peppermint water; or the opiate pill, or a grain of solid opium Another medicine, very useful for as-

suaging pain, is hyoscyamus, or henbane; the dose is from half a drachm to a drachm of the tincture, or from one grain to three grains of the extract.

Great care must be taken not to give anodynes from the mere circumstance of pains being felt. A person has an acute pain of the side from inflammation of the lungs; or of the bowels, from inflammation there. In such cases, the true anodyne is a large bleeding; and a dose of opium or gin, so frequently given on such occasions, would be destructive.

ANOMALOUS. Irregular. When a disease is accompanied by unusual symptoms, which render it difficult to arrange it under any particular class, or when the symptoms of a disease vary from those generally exhibited, the disease or the symptoms are said to be *anomalous.*

ANTACIDS. Medicines which correct acidity of the stomach, being nearly the same as what are called absorbents. Such medicines are useful for removing the present disagreeable symptoms; but the recurrence of such symptoms is best prevented by restoring the healthy action of the stomach, and of the general system; and by avoiding such articles of diet as one finds by his own experience are apt to produce acidity or heartburn. The principal antacids are magnesia, chalk, lime water, caustic potash, carbonate of potash, or carbonate of soda, ammonia, or its carbonate. For the doses of each, see under their respective articles. *See* ABSORBENTS.

ANTHELMINTICS. Medicines which have the power of destroying or expelling worms. *See* WORMS.

ANTIDOTE. A medicine which has the power of counteracting the injurious effects of some poisonous substance taken into the stomach, or otherwise introduced into the system. The perfection of an antidote would be, that it would instantly and infallibly prevent all mischief from a poison; that the poison and the antidote, when both swallowed, should keep the person in the same state as if he had swallowed nothing at all; or that if he persisted in a long course of antidotes, he should, like Mithridates, be incapable of suffering by poison. But, in reality, we possess very few such antidotes. In our laboratories, or vessels, a poisonous mineral or vegetable production may, by the addition of another substance, be so changed, that the new product would be quite harmless to the body; but too often the poison swallowed has begun to exert its destructive effects before the antidote can be applied, or the living powers of the stomach may prevent the chemical decomposition that would otherwise take place. A metallic acrid substance may be swallowed, and may produce not only the corrosion it would do out of the body, but excite inflammation, spreading extensively to the neighbouring parts. It will not do merely to throw in a substance, if such there be, which would produce an inert one in combination with some of the ingredients of the first; but we must counteract the effects of inflammation, and its consequences.

Different poisons require different remedies, and it is right to know such as may be quickly and easily applied in the various accidents which occur in domestic life. The substances most frequently swallowed as poisons are from the mineral kingdom, as arsenic, corrosive sublimate, preparations of copper, tin, bismuth, and lead; or from the vegetable kingdom, as opium, henbane, cherry-laurel, stramonium, tobacco, hemlock, foxglove, deadly nightshade. The strong acids and alkalis not unfrequently are the source of fatal accidents in domestic life, and of late numerous instances have occurred of poisoning by the oxalic acid, which is employed for the cleaning of boot-tops. By referring to these several articles will be seen the most advisable treatment for each.

ANTIMONY. A metal from which are derived some of the most celebrated and useful substances employed in the practice of physic. The ancients were acquainted with an ore of it, which was

called *stibum;* but it does not appear that they considered this substance as containing a metal, or that they knew what modern chemists call antimony, in a state of purity. It is said to have obtained its name, which signifies *hostile to monks,* from the alarming and destructive effects it produced among the inhabitants of a certain monastery, to whom it was given by Basil Valentine, one of their brethren, who had observed that some pigs who had eaten of madder, with which some ore of the metal was accidentally mixed, became thriving and fat. He wished to produce the same healthy and respectable appearance on his brethren, but the subjects of the experiment not being precisely the same, what fattened the swine, killed the monks. Basil Valentine is the first writer who describes the method of extracting the metal from its ore. Towards the end of the fourteenth century, he published the Triumphal Chariot of Antimony, a work memorable for the numerous chemical facts and processes first described in it. To the exertions of Basil Valentine, and of the medical alchymists who followed him, we are indebted, not only for our knowledge of all the properties of antimony, but also for the introduction of many chemical remedies, in opposition to the Galenical remedies, which were retained with such obstinacy by the regular practitioners of the time.

Antimony, as a medicine, is valuable for its emetic powers; and by skilful management it is made a useful sudorific, and is also employed to diminish too great excitement of the vascular system.

No metal, not even mercury itself, has been tortured into such a variety of forms by chemists, no drug has excited more the attention of physicians. Some considered it as a specific for every disease, others contended that it should be detested as a virulent poison. The parliament of Paris condemned it by public authority; and by a singular coincidence, their great monarch, Louis XIV. nearly lost his life by an overdose of this medicine; at least this is told by Guy Patin, who wrote against antimony with great virulence. After many plans proposed and rejected, modern pharmacy is contented with a very few preparations of antimony; and practitioners find them sufficient for every useful purpose, and are freed from the uncertain doses and dangerous forms which annoyed their predecessors.

The great object with respect to antimonials is to get a medicine that we can depend upon. The ancient way of preparing an emetic wine, was to pour Rhenish wine into a cup made of antimony, let it stand some days, and then to use the wine as impregnated with the virtues of the antimony. The uncertainty of the preparation was great. Sometimes five parts in the hundred of the metallic preparation were obtained, sometimes twenty-seven in the hundred. Antimonials must be dissolved before they act as emetics; they would dissolve in the stomach, but the acid they would there meet with is uncertain. The preparation of antimony most to be depended on is tartar emetic, so called because we boil the cream of tartar and crocus of antimony together in water, and thus prepare the salt so generally used in medicine. Its chemical name is the tartrate of antimony and potash.

Tartar emetic is given in doses of from one grain to three, dissolved in water; and in these doses it proves powerfully emetic, occasioning very complete clearing of the stomach, considerable depression of strength, and paleness of the countenance; and besides, enough is frequently left to pass into the bowels, and to prove purgative. Two grains are to be dissolved in four ounces of water; and a table-spoonful of this solution given every ten minutes or quarter of an hour, till vomiting takes place, is a good way of giving tartar emetic. By giving the same solution in rather smaller doses, and at longer intervals, as of two hours or three hours, instead of vomiting, the effect is produced of bringing out a gentle perspiration, which is of the greatest benefit in many diseases, especially feverish dis-

eases. Tartar emetic is also given dissolved in wine; an ounce of the antimonial wine contains two grains of tartar emetic; but it is not so often given as the watery solution, because in febrile complaints the wine might be improper. Tartar emetic does not often lie on the stomach, but if in large doses it should do so, it acts as a virulent poison: its expulsion must be promoted by oil and warm water, or its effects counteracted oy taking the decoction of yellow bark, which renders the tartar emetic inert. A cordial is sometimes required after the operation of tartar emetic, even in the small doses used in this country. When it has acted too violently, opium may be given to allay the nervous symptoms; and when the exhaustion from vomiting has been great, a little wine or other cordial may be given to relieve it. The continental physicians give tartar emetic in doses which appear terrible to a British practitioner: this can be accounted for only by knowing that its activity is diminished or destroyed by substances given along with it, especially bitters and the bark. Twenty grains of tartar emetic, with an ounce of Peruvian bark in decoction, does not usually excite vomiting.

Another antimonial much used with the view of promoting gentle perspiration in febrile complaints, is the antimonial powder, for which the dose is three or four grains every four hours. A preparation of a very similar kind to this, is the celebrated James's Powder, which has maintained its reputation for nearly a hundred years. Antimony, conjoined with some narcotic medicine, is a better sudorific even than when employed alone; the dose for this purpose is thirty drops of laudanum, with forty of antimonial wine, to be given in an ounce of water at bed-time. A mixture of antimonial powder, calomel, and opium, in the proportion of three grains of the powder, two of calomel, and one of opium, in the form of a pill, with mucilage of gum arabic, crumb of bread, or any convenient substance, is a good sudorific. When an emetic is wanted for children, antimonials are seldom those we should employ.

External use of ANTIMONY.—Tartar emetic, when well mixed with lard, in the proportion of one or two drachms of the substance to an ounce of the lard, forms a very irritating ointment, which occasions a pustular eruption, something resembling the vesicles of cow-pox, and proving very serviceable in deep-seated inflammation. The pustules are very painful, and should they become much irritated, a soft poultice of bread and milk will in general give relief. Frictions with this ointment at the pit of the stomach have been much recommended in hooping-cough.

ANTIPERISTALTIC motion of the intestines, a symptom of the iliac passion, viz. the bowels, instead of propelling their contents downwards, drive them in a contrary direction, so that medicines given by injection, come out at the mouth.

ANTIPHLOGISTIC. Counteracting inflammation, or the inflammatory tendency. This epithet is chiefly applied to what is called the *Antiphlogistic Regimen*, under which are included all the rules, prohibitions, and observances which are prescribed in cases of fever, inflammation, and diseases of excitement. These directions, viewed by themselves, may appear minute, trifling, and beneath the dignity of science; but, taken together, they form a plan of acting, of which the best recommendation is the safety attending their observance, and the fatal results which ensue when they are rashly, obstinately, or secretly disregarded. The enlightened and upright practitioner does not perplex his patient with the volubility of medical phrases which he cannot understand, nor does he needlessly pour in quantities of nauseous drugs; he knows that in many things the patient must minister to himself, and in many, the good sense of his attendants must ward off the mischief arising from surrounding circumstances of hourly or incessant occurrence. The antiphlogistic regimen consists in the removal or non-application of

whatever would greatly or unnecessarily employ the powers of either the body or mind. To illustrate what is meant, let us take the case of a patient in inflammatory fever, or in pleurisy. The medical attendant will, of course, when first called, use the proper remedies, as blood-letting, purging, and determining to the skin; but he will do comparatively little for his patient's recovery, if his directions for his after management are not precise, and accurately attended to. The air of the apartment must be kept pure and temperate, there ought to be no unnecessary attendants in the room, fresh air should be admitted from time to time, by a cautious opening of the doors and windows; and all evacuations from the body should be quickly removed from the apartment; there should be no glare of light from the sun, or fire, or candles; the room should be darkened, and the curtains, at least those next the windows, should generally be closed. No talking or whispering should be kept up in the room; the noise of carts or carriages in the street should be deafened by straw or oak bark, or where this is impracticable, the ears should be slightly stopped with cotton or wool. The regulation of the diet and of the drink is of primary importance, and it is here that physicians have the greatest difficulties to encounter. The friends of the patient tell with real concern, that he has taken no food for many days, that he must be very weak, and that he surely can never get through if he be kept so low; they do not consider the salutary instinct of nature, in loathing the food which the stomach cannot digest; and they venture to give what they think a very little nourishment, in the shape of beef-tea or chicken-broth. The physician at his next visit finds the fever still high, the pulse full and strong, the thirst urgent, the face flushed; he suspects or obtains a confession of the imprudence which has been committed, and is obliged again to bleed largely to counteract or repair the mischief. When nourishment is allowed at all, it should be of the mildest kind, and such as does not heat or stimulate the body, as thin gruel, or panado, sago, rice, or arrow-root. Equally alarming and destructive events follow from too strong drinks. However general among the lower classes may be the hateful practice of using spirits on all occasions, and their faith in the mysterious virtues of wine, it is to be hoped that few among the well-informed and educated classes would venture on strong drink in any illness, without the express order of the physician; but even here, injury is sometimes done, especially in the inflammatory diseases of child-bed, by the ignorance or officiousness of nurses and servants. The drink should be of the mildest sort, neither too hot nor too cold, though it is in many cases very proper to allow the patient cold water, for which he often has instinctively a strong and not unsafe desire. The drinks proper in inflammatory diseases are toast-water, barley-water, water-gruel, various preserves of fruit dissolved in water, as strawberry jam, raspberry jam, &c. whey of milk, vinegar and water, sulphuric acid largely diluted with water, water from cream of tartar, lemonade, and the like. Beer may be allowed when there is no reason against it from the presence of much flatulence. Much irritation will be prevented by frequent changes of linen and bed-clothes. Much of the antiphlogistic regimen is to be directed to the mind. Every source of uneasiness and anxiety must be avoided; there must be no talking about business, no hasty or unguarded narratives introduced, no exhibition of distress and hurry, of alarm, or mystery, in the faces of friends or attendants. Every thing should be done for the patient's comfort, with calmness and good sense; and while we cannot sanction any deceiving of his mind with regard to his situation, when there is real danger, we consider it as of great importance to give him no unnecessary agitation, by the imprudence of those around him, or by representing things as worse than they really are.

ANTISCORBUTICS. Medicines which prevent or cure the sea-scurvy. In vulgar and popular usage, scurvy means every disease to which the skin is subject; but it should be restricted to the disease brought on by living on salt provisions, without a due mixture of vegetable diet, whether at sea or land. Fresh vegetables are the true antiscorbutics, such as cabbage, cresses, lemons, &c. but as ships in long voyages would be badly off if they were dependent on vegetables, it is fortunate that we are now possessed of an antiscorbutic, cheap, portable, and infallible; this is lime juice. An ounce a-day, given in water or any mild fluid, will prevent or cure the scurvy; and in the longest voyages, the mariner may keep his mind free from the smallest dread of that formidable malady, which in former times rendered useless the bravery, skill, and perseverance of British seamen, and whose symptoms and consequences, both to the individual and to the public service, are so graphically described in the narrative of Anson's Voyage.

ANTISEPTICS. Substances which prevent animal and vegetable matters from running into putrefaction. The principal of these are sea-salt, sugar, vinegar, bark, and hops. These are much used in pickling and preserving meat and vegetables. A tendency to putrescency is characteristic of several diseases and conditions of the body: this is indicated by the fluid discharges being of a very offensive smell, and very quickly undergoing decomposition. Such tendency is seen in malignant typhus fever, putrid sore throat, gangrene, and sea-scurvy. It is a very proper measure to give medicines or diet to counteract this; but the medicines to be given as antiseptics, are not those which resist putrefaction in substances out of the body, but those which act on the living powers of the system, rather than on their chemical composition. The symptoms which are thought to denote putrescency in any disease, are to be combated in every particular case by appropriate remedies; in some, as fevers, we employ bitters, quassia, or the bark; in others, as sore throat, acids used as drink or gargles; or carbonic acid, from soda powders, or small beer; or powdered charcoal and barm poultices, to fetid and foul ulcers. In the sea-scurvy, which is of so putrescent a nature, the true antiseptic is lemon juice or fresh vegetables.

ANTISPASMODICS. Medicines given to relieve spasm, or irregular and painful actions of muscles, or muscular fibres. Antispasmodics, properly so called, are given rather to put an end to a fit, or sudden attack of painful convulsions, than to cure the disease itself. A patient is seized with epilepsy, and to put a stop to the fit, we administer to him hartshorn, camphor, or ether; but this will not cure the disease, or prevent its return; we must try to discover its cause, whether it proceeds from worms, from dentition, or from a wound; and we must direct our after practice accordingly. Antispasmodics are useful in cramp of the stomach, in griping pains of the bowels, asthma, hysterics, and some other sudden and violent affections. In griping of the bowels, it is a very common practice among the common people to trust to the antispasmodic powers of ardent spirits, either alone or made into toddy; but the possibility of the pain being a symptom of inflammation, should in every instance deter from this expedient. If the pain arise merely from spasm or flatulence, a cupful of warm water will be a far better remedy. Frequently, cold water suddenly applied to some part of the body relieves the spasm there or even in distant parts. Thus the cramp in the leg is stopped by cold applied to the foot. Sometimes the warm bath relieves spasm, sometimes blood-letting does it. It appears, then, that whatever makes a strong or sudden impression on the nervous system, is to be regarded as an antispasmodic; but the medicines which commonly go under that name, and produce a sudden relaxation of the spasm, are musk, castor, ammonia, assafetida, vale-

rian, opium, ether, camphor. A good antispasmodic draught in asthma is the following: thirty drops of laudanum, an ounce of water, half a tea-spoonful of ether quickly added, and taken suddenly.

ANUS. The lowest part of the straight gut, commonly called the fundament. It is surrounded by circular fibres, the assemblage of which is called the *sphincter ani*, which keeps the orifice closed, except when the bowels are to be evacuated. The parts in its neighbourhood are abundantly supplied with blood; hence in operations for *fistula in ano*, a considerable loss of blood sometimes happens.

As there is also a great deal of fat and cellular substance about these parts, they are not unfrequently the seat of large collections of matter, which, if not skilfully treated, may give occasion to fistulas, which are both disgusting and troublesome. The anus is also subject to piles and other excrescences. When the inner coat of the lower intestine is protruded out of the body, which it sometimes is to a very great length, especially in delicate children, the complaint is called *prolapsus ani*. It is alarming to those who know not what it is, and in every case should be carefully attended to. The person should not sit long at stool, nor strain much; children should be watched for this purpose, their bowels should be kept easy, but not too loose, the gut should be carefully replaced by gentle pressure with the fingers, besmeared with sweet oil; and the parts strengthened by the application of tepid water, and afterwards of cold water, to the loins.

ANXIETY, in medical language means the restless uneasiness attendant on several diseases. It may arise from spasm, as in asthma, hysterics, and cholera morbus; or from uneasiness at the stomach, proceeding either from causes affecting the stomach itself, or acting by sympathy, as a stone in the kidney; or it may arise from congestion of blood in some particular set of vessels, as in inflammatory affections. It is to be relieved by the removal or mitigation of the original disease.

AORTA. The name of the large artery, whose branches are distributed to every part of the body. It commences at the left ventricle of the heart, rises in the left side of the chest, gives off several arteries, bends downwards, passes through the diaphragm, proceeds down upon the vertebræ, and at the fourth vertebra of the loins divides into two large trunks, for the supply of the parts within the pelvis, and of the two lower extremities. At its commencement, the aorta is furnished with valves, which prevent the blood from being driven back into the left ventricle of the heart. The aorta is subject to various disorders, as inflammation, ulceration, aneurism, ossification, &c.

APERIENT, signifies opening, and is applied to those medicines which procure easy stools without severe or copious purging. Many medicines which in their usual doses act as purges, may in diminished doses be made to act as gentle aperients. An ounce of Epsom or of Glauber's salts dissolved in about four ounces of water, and taken pretty warm, will purge strongly; but half an ounce in the same or even a larger quantity of water will operate as an aperient or laxative. Castor oil, in the dose of from half an ounce to an ounce, is a good aperient, or a desert-spoonful of sulphur, or a desert-spoonful of equal parts of sulphur and cream of tartar, taken as an electuary; or an infusion of senna, with or without a small spoonful of tamarinds; or a tea-spoonful of cream of tartar, or diminished doses of any of the purging salts, may be taken as aperients. The cases in which it is desirable or necessary to use aperients and not purges, are in persons of a sedentary life, women in the state of pregnancy, and those who are subject to piles.

APEX. The point or top of a thing; as the *apex* of the heart, the *apex* of the tongue, means the pointed extremity of these parts.

APHTHÆ. *See* THRUSH, or SORE MOUTH OF CHILDREN.

APOPLEXY. A disease in which the patient suddenly falls down, deprived of sense and motion; and which, in all languages, derives its name from the sudden manner of its attack, as if the patient were struck down by some invisible hand, by lightning, or some other agent, equally sudden and violent.

Symptoms. A person seized with apoplexy in its most perfect form, suddenly falls down, deprived of sense and motion, breathes heavily, and with a snoring sound; sometimes convulsions occur, and foam issues from the mouth. The pulse is full and strong, a cold clammy sweat breaks out over all the body; and the accumulating saliva, the bloated countenance, and the noisy laborious breathing, combine to form a distressing spectacle. The disease is not always so complete and violent, but varies in its symptoms, as is well described by Dr. Abercrombie: "Sometimes the disease begins with a sudden attack of violent pain in the head, the patient becomes pale, sick and faint, generally vomits; and frequently, though not always, falls down in a state resembling fainting, the face very pale, the pulse very small. This is sometimes accompanied by slight convulsion. In other cases he does not fall down, the sudden attack of pain being only accompanied by slight and transient loss of recollection. In both cases he recovers in a few minutes, is quite sensible, and able to walk; continues to complain of intense headach; after a considerable time, perhaps some hours, becomes oppressed, forgetful and incoherent, and thus gradually sinks into deep sleep, from which he never recovers. In some cases, palsy of one side occurs, but in others, there is no palsy. There is another form of the disease, in which the patient is suddenly deprived of the power of one side of the body, and of speech, without stupor; or if the first attack is accompanied with stupor, this soon goes off; he appears sensible of his situation, and endeavours to express his feelings by signs. In some cases, the attack passes gradually into apoplexy, perhaps after a few hours; in others, under the proper treatment, the patient recovers perfectly in a few days. In many cases, the recovery is gradual, and it is only at the end of several weeks or months that the complaint is removed."—(*Edinburgh Medical Journal.*)

It is a matter of very great difficulty to determine what is the particular state of the brain, which gives rise to the symptoms of apoplexy. Sometimes, after a fatal case, when the head is opened, we find a large quantity of coagulated blood, and we consider the pressure of this effused blood as completely explaining what has happened. But in other cases which have ended fatally, there is only a small quantity of fluid in some part of the brain; and in others, even after very marked symptoms, no injury whatever, or deviation from the healthy appearance can be perceived in the brain.

There are certain habits of body that seem more peculiarly disposed to this disease. Men with short thick necks, large heads, and corpulent bellies, especially after their thirty-fifth or fortieth year, are very frequently the subjects of this disease; but very many examples occur of a make directly the reverse of this, viz. tall and slender, being also attacked with apoplexy.

Warnings of approaching APOPLEXY.—Although apoplexy generally comes on suddenly, yet in many cases the patient has previous warnings, which give him reason to dread its approach. He is for some time much troubled with headachs, sometimes acute, but oftener dull and heavy. This sensation of weight or pain in the head is increased by sudden motions of the body, by stooping, or by violent exercise; and the use of wine, of spirits alone or diluted with water, and especially the use of ale and porter, and tobacco in its various forms, is apt to increase the headach. Various disorders of the sight also precede an attack of apoplexy; a swimming or darkness seems

to overspread the eyes; specks, motes, or spangles appear to dance before them; and in some cases the patient even squints or sees double. There is a ringing in the ears, a sensation of flushing of the face, and beating of the temporal arteries, with hesitation or defect of speech, and confusion of thought or loss of memory.

Causes of APOPLEXY.—We have partly anticipated these when we stated the habit of body, and the time of life most subject to apoplexy; to these observations we now add the following causes. Full living, luxurious idleness, the frequent use of strong liquors, of opium, either solid or in the form of laudanum, tobacco. All these circumstances give the tendency to the disease; and in constitutions predisposed to it, the fit is brought on by many occurrences which would not have the same effect on others. Of the things which bring on a fit, the following are the chief: 1. Intoxication. Too many cases are known where the drunkard suffers before his revelry is ended. The habitual headach, the livid countenance, and the inflamed eyes, characteristic of frequent intoxication, indicate a dangerous tendency of the blood to the head; and such flow is, by some debauch more copious than usual, converted into a fatal fit of apoplexy. An overdose of opium will have the same effect. 2. A full meal. Many instances of the guests falling down in apoplexy have occurred during city feasts and the banquets of clubs. We are sometimes told, with great surprise, of persons found dead in their beds who had eaten a hearty supper the night before, the narrator not suspecting that this supper, in all probability, had been the cause of their death. 3. Violent exercise, or going up a steep place. 4. Much exertion of the organs of respiration, as in coughing, vomiting, laughing, long or loud speaking. 5. Passions of the mind, especially anger. 6. Suppression of evacuations, as of the monthly discharge, or the drying up of bleeding piles, or of an issue, or the sudden check of salivation. 7. Exposure to the sun's rays, which may cause a *coup de soleil;* or being long in crowded rooms, or overheated bedchambers. 8. Stooping much or long. 9. Tying any thing tight about the neck; or twisting the neck by sudden turning round of the head, without corresponding motion of the body.

Prognosis of APOPLEXY. As to the probable event of an apoplectic attack, we must be guided, in every case, by a careful consideration of the various symptoms. If the fit has lasted long, by which we mean from two to three days; if the breathing is very laborious and loud; if the patient is far advanced in life, it is probable that the disease will at that time prove fatal. A second attack is always to be considered as of more danger than at first; and when apoplexy comes upon a patient who has had frequent attacks of epilepsy, it very commonly proves fatal.

Treatment of APOPLEXY. The moment a person is seized in the manner above described, it is absolutely necessary that assistance should be given; he must be raised so as to have the head and shoulders higher than other parts of the body, every thing about the neck should be unbuttoned and free; he should not be surrounded by a multitude of useless bystanders; and fresh air should be freely admitted. Spirits, cordials, and stimulants are destructive. Bleeding from a large wound in the jugular vein, from the temporal artery, or from the arm, should be freely employed; and the quantity not regulated by any measurement, but by the effect produced. As soon as the patient is able to swallow, some strong, speedy-acting purge should be given him; for this purpose, a drachm of compound powder of jalap, or the same quantity, with five grains of gamboge, should be given, or eight grains of calomel with twenty of jalap; or a full dose of Epsom salts. The head ought then to be shaved and washed with cold water, or with vinegar and water; and afterwards, if any appearance of the disease returns leeches and a blister should be applied.

When spontaneous vomiting has occurred, the patient has seemed to be the better for it; and emetics, when prudently administered, and carefully watched in their operation, have done good. There can be little doubt of their propriety, when we know that the stomach is loaded with a full and varied meal. Apoplexy from *coup de soleil* does not bear evacuation. In some cases, these remedies are successful, and the patient is restored to perfect health; but in others, a limb, or one half of the body is palsied; the mental faculties are impaired, or the speech is lost or injured. Whether the cure be complete or not, the after-treatment of the patient is a matter of the first importance. There is every reason to fear that a fresh attack of the disease will come on; and every thing must be done to keep the body in the most moderate and quiet state. There should be an issue or seton in the neck, or other convenient situation; the bowels should be kept very open by frequent laxative medicines; every article of diet that is heating or indigestible should be avoided; and malt liquors, wine and spirits should be totally abstained from.

Means of preventing APOPLEXY. Having thus described the disease, with the various causes that excite it, and the treatment proper during the attack, it may be useful to give some directions to those who, though in perfect health, have reason from their make and habits, to fear an attack of the disease. Such persons ought to live a life of rigid temperance, to avoid whatever food and sauces would tempt them to indulge in gluttony, to shun excess in wine and strong liquors of every kind, to guard against attaining a full and corpulent habit of body; and they should pay particular attention to keeping the bowels open. A due proportion of vegetables should form part of the diet; and plain water, toast water, or small beer, on account of its gently laxative quality, should be the common drink. It is proper to avoid that stupifying drug tobacco. Regular exercise should be taken, but not to the length of inducing fatigue; and walking should be as much as possible in the open air, and on level ground. When the more urgent symptoms occur, as giddiness, dimness of sight, ringing of the ears, flushing of the countenance, it is better not to wait for the actual attack, but to lose twelve or sixteen ounces of blood, and to employ free purging. It is proper to use the shower bath on the shaven head, which is also to be frequently spunged with water, or vinegar and water.

APOTHECARY. A person whose occupation it is to compound and prepare medicines.

APOTHECARIES' WEIGHT. For the purpose of administering medicines the common troy pound is divided into ounces, drachms, scruples, and grains: twenty grains, gr. are one scruple, ℈; three scruples are one drachm, ʒ; eight drachms one ounce, ℥; twelve ounces are one pound, lb.

APPETITE, Loss of, in medical language, *anorexia*, is a very common symptom of fevers and other disorders. In feverish disorders of all kinds, both those attended with eruptions, as small-pox, measles, &c. and those of the inflammatory and nervous kind, it seems to be a salutary instinct of nature to prevent the swallowing of food at a period when it could be of no benefit to the system, but would rather aggravate the disease then present, by loading the stomach with matter which it could not digest, or which would increase the fever by its stimulating qualities. Whatever cures the fever will tend to restore the appetite; and a moderate desire of food is among the first favourable symptoms of returning health. Here, above most cases, is a necessity for the judicious advice of an intelligent practitioner; and here the mistaken kindness of friends is most apt to produce injurious effects. The diet of convalescents from fever should be very cautiously regulated. *See* FEVER *and* DIET.

When loss of appetite occurs without

loathing of food, and appears to be the principal evil of which the patient complains, it is owing generally to previous habitual excess in eating or drinking, and in some cases to the use of bad diet. In old age, it may proceed from weakness. A return to temperance is the first part of the cure; and it is to be promoted by exercise, cold bathing, tonic medicines, as iron, bitters, and Peruvian bark, with the choice of such food as the patient finds by trial to agree best with his stomach. For those whose circumstances admit, the use of Bath or Buxton waters may be serviceable. *See* STOMACH COMPLAINTS.

APPLES. A well known fruit, less watery than some others which are eaten, and not so apt to pass into a hurtful fermentation in the stomach. Being somewhat firm in their texture, they are retained pretty long in the stomach, and often prove rather indigestible. Apples, when baked, afford a very pleasant article of food, and in some cases may prove useful by their laxative properties. Apples should not be eaten after fish; and they are apt to disagree with the stomachs and bowels of children when their digestion is not perfectly good.

APRICOT, a very wholesome and easily digestible stone fruit.

AQUA FORTIS. *See* NITRIC ACID.

AQUA REGIA, a term which has found its way from the alchymists into popular use, signifying a mixture of the nitric and muriatic acids in the proportion of two parts of the nitric to one of the muriatic; so called because it is the only solvent of gold, which received from the alchymists the title of *rex metallorum*, king of metals.

ARDENT SPIRITS. A general name for the spirituous products of distillation from various substances. The principal of these are brandy, rum, gin, whisky, and arrack, obtained respectively from wine, sugar, juniper berries, barley, and rice. The pernicious influence exerted by them, both on the moral character and the bodily constitution of those who are addicted to their use, renders the subject interesting to the ethical philosopher, as well as the physician; and affords an excellent specimen of the unsatisfactory nature of sensual indulgences, which, when they have ceased to give pleasure, still leave an unsatiable craving for their gratification. The unhappy drunkard (and we may here include the opium taker, and the person who is constantly stimulating his appetite by bitters and cordials) sees in the decline of his health, and the decay of his fortune, the melancholy punishment of his irregularities; yet, in spite of all the warnings of his friends, of the convictions of his own mind, and the prospect of want impending over him, he continues the pernicious practice till disease or death overtakes him. A few, but very few, are reclaimed by religious principle from this deplorable habit; but there is hardly any other practice so powerful in removing its victims from all probability of improvement.

The diseases brought on by the use of ardent spirits are numerous and intractable; and this, whether used without any addition, or in the form of grog, toddy, or punch. Indigestion and stomach complaints, dropsy, liver disease, apoplexy, palsy, convulsions, and many others, are traced to dram-drinking. Spirits may occasionally be useful as a medicine. In some complaints, with indigestion, wine and beer disagree with the stomach, and produce acidity; in such cases, a small quantity of spirits and water may be used with advantage; but Dr. Paris says its strength should be uniform, and no circumstances should induce the patient to increase the quantity of the spirit. The habit of drinking *liqueurs* cannot be too loudly reprobated; many of these cordials are impregnated with narcotic substances, which add to the noxious qualities of the spirit.

AREOLA. A small brown ring surrounding the nipples of females. During pregnancy, it becomes larger, and rather darker in colour. The inflamed circle

round the vesicles of cow-pox is also termed an *areola.*

ARM-PIT, called *Axilla* by anatomists, is the deep cavity of the shoulder-joint, most conspicuously marked out when the arm is held in the extended position. It contains many very important parts, particularly the large veins and arteries of the arm, the nerves which supply the limb, and many lymphatic glands. Sometimes, one or more of these glands swell and give rise to abscess, and the formation of great quantities of purulent matter; and it is these glands which are so apt to become diseased in cancer, giving rise to the lamentable train of symptoms which accompany the latter stages of that deplorable malady. The knowledge of the anatomy of this cavity is of indispensable necessity to the surgeon.

AROMATICS. Substances which have an agreeable spicy scent, and a pleasant pungent taste. The principal aromatics are the following: Cloves, nutmeg, mace, cinnamon, pepper, ginger, and the essential oils derived from various plants by distillation, as oil of rosemary, lavender, peppermint, &c. These aromatics are used in medicine, principally to give flavour to nauseous drugs; or in small quantities to stimulate the stomach. Aromatics have a great affinity with tonics, and some vegetables have the properties of the two kinds of substances so blended, that it is difficult to say to which class they belong. Stimulant aromatics are chiefly remarkable for the rapidity of their effects, and tonics for their permanency. A preparation of aromatics called the Portland powder, composed of equal parts of serpentaria, gentian, chamædrys, and centaury, was once famous in the cure of gout; but it is not likely to be much used by those who recollect what is said by Dr. Cullen, viz. " In every instance which I have known of its exhibition for the length of time prescribed, the persons who had taken it were indeed afterwards free from an inflammatory affection of the joints, but they were affected with many symptoms of the atonic gout; and all, soon after finishing their course of the medicine, have been attacked with apoplexy, asthma, or dropsy, which proved fatal."

AROMATIC VINEGAR. A solution of camphor, and the oils of cloves, of lavender, and rosemary, in very strong vinegar. It is useful in faintings and other debilitating affections.

ARQUEBUSADE. " A distilled spirit prepared from a great variety of aromatic plants, as thyme, origanum, balm, lavender, &c. The medicinal virtues of the distilled aromatic waters and spirits have, perhaps, been much overrated; and numerous distinctions between them with regard to their effects, have been made without much foundation. All of them are cordial and stimulating, and as such, have considerable efficacy in sudden faintings, sickness, and languor; but the difference of effect between the simple aromatic waters and the spirituous waters is so great, that much of the virtue of the latter is to be ascribed to the spirit. They are largely used in medicine; and from their agreeable flavour and fragrancy, they will conceal the nauseous taste and smell of many of the most unpalatable drugs. The consumption of the fragrant aromatic spirits is perhaps still greater as perfumes for the toilet; and the flavoured spirits, more than all, as drams and cordials."—(Rees's *Cyclopædia.*)—*See* Eau de Cologne.

ARRACK. The name of an ardent spirit distilled from rice in China and the East Indies.

ARROW-ROOT. The root of a tree, *Maranta arundinacea,* cultivated in the West Indies. It has its name from being used to extract the poison communicated by poisoned arrows, though it is not easy to believe it to be possessed of that power. A starch is obtained from this plant by the following process: The roots, when a year old, are beaten to a pulp in a large wooden mortar; this pulp is well stirred in a large tub of clean water, and the fibrous part is wrung out, and thrown away. The milky liquor being passed

through a hair sieve or coarse cloth, is allowed to settle, and the clear water is drained off. The white mass is again mixed with clean water, and drained; it is then dried in the sun, and is a pure starch, as it is sold in the shops. This arrow-root contains in a small bulk a great proportion of nourishment. Boiled in water, it forms an excellent nutritious jelly, well adapted for invalids and for children. The following is the method of preparing it: Take a dessert-spoonful of the powder, and add as much cold water as will make it into a paste; to this add eight ounces of boiling water, stir it briskly, and boil it for a few minutes, when it will become a clear, smooth jelly. To this may be added a little milk and sugar; or to debilitated patients a little wine, either port or sherry, with a little nutmeg to make it sit light on the stomach; and for children, whose stomachs might be rendered sour by wine, it may be useful to add a little of the sugar of anise, or a few drops of the essence of caraway seeds, or of cinnamon.

ARSENIC. A metal famous for affording one of the most virulent, and, unhappily, too accessible poisons known. As it is a substance whose fatal effects are too frequently observed, and as it is the instrument with which revenge or malignity often accomplishes its detestable purposes, we shall give a pretty full detail of what is known concerning this noted mineral.

Arsenic, in strict chemical language, is a metal of a bluish-white colour, not unlike that of steel, and has a good deal of brilliancy. It is the softest of all the metallic bodies, and so brittle that it may be reduced to a fine powder by pounding in a mortar. It has no sensible smell when cold, but when heated it sends forth a strong smell of garlic. Like other metals, it has no effect on the living body in its metallic state; but when combined with oxygen, its properties are very different indeed. When the metal is exposed to a moderate heat, in contact with air, it rises in the form of a white powder, and the garlic smell is perceived, not from the oxide, but from the *metal* in a state of vapour. This white powder is the oxide of arsenic, and is what is generally known in commerce and in common language by the name of *Arsenic*. It has a sharp acrid taste, which at last leaves an impression of sweetness, and is a very virulent poison.

Symptoms produced by swallowing ARSENIC. The symptoms produced on the living body by a very small dose of arsenic are some of the following: Within about half an hour after taking the poison, there occur spasmodic pains of the stomach and bowels, with a sensation of heat in the mouth, and tightness about the throat, a feeling of tenseness of the skin of the head, and of the eyelids, inflammation of the eyes, and itching of the face and neck. To these succeed incessant vomiting and purging, attended by excruciating pain of almost every part of the body, but especially of the stomach, bowels, and head; the pulse, which at first was full, hard, and frequent, sinks, and becomes irregular; clamminess of the skin; cold sweats, purple spots, and convulsions precede death; or if the sufferer does not die, hectic fever, palsy, and weakness of mind and body, distress him during the rest of his life. It is said, that in cases of poisoning by arsenic, the body runs suddenly into putrefaction.

Treatment of those who have swallowed ARSENIC. The great object is to procure its expulsion from the stomach as quickly and easily as possible. If a practitioner be called in before vomiting has come on, it may be proper to excite it by tickling the throat with a feather, or by giving a dose of white vitriol, sufficient to excite instant vomiting. The dose for this purpose is from twenty-five to thirty grains, or five grains of blue vitriol, (the sulphate of copper) may be given; the advantages of those emetics are, that they act quickly, and require little dilution for their action, which is of great importance, as preventing the absorption of the arsenic; and as blood-letting favours this absorption, we must be cautious not to employ it while

any portion of arsenic remains in the body. But in general the vomiting has begun before a practitioner is called. Lime water then should be plentifully given. The bowels must be emptied by the mildest means, as by castor oil, alone, or with olive oil, or in mutton broth. Opium, in the dose of one or two grains, or forty drops of laudanum, or five grains of camphor, or a glassful of camphor julep, or half a tea-spoonful of ether in water may be given to quiet the nervous irritability; and when the action of the heart is feeble, ammonia in pretty large doses has been found useful. But the probability is, that inflammatory action will take place in the stomach and intestines; and, therefore, we must be very cautious how we treat the patient with stimulating substances. We must, when these inflammatory symptoms appear, have recourse to bleeding, but with great caution, aware of the debility that may rapidly follow; we must give mild laxatives, employ a cooling regimen, and the usual remedies and observances against increased arterial action, as detailed in the article ANTIPHLOGISTIC REGIMEN. The debility, the palsy, and impaired health, are to be treated with bark and wine, strengthening medicines, sea-bathing, light nutritious diet, and country air, with moderate exercise.

Notwithstanding the destructive powers of arsenic, it has been used as an article of the Materia Medica, and employed for the cure of intermittent fevers, periodical headachs, and in several diseases of the skin. The safest form under which it can be employed in the cure of diseases is the arsenical solution of Dr. Fowler of Stafford, beginning with the dose of four drops, and increasing it gradually to thirty drops twice a-day. The addition of a few drops of the wine of opium is said to render its operation safer and more efficacious. The precise manner of explaining the action of arsenic in the cure of diseases is not agreed on by physicians. When there is a tendency to inflammatory action, it should be avoided. When the system is under the influence of arsenic thus introduced, the following symptoms appear: Thickness, redness, and stiffness of the eyelids, soreness of the gums, salivation, itching of the skin, cough, headach, and pain of the stomach and bowels.

Appearances of the bodies of those who have died in consequence of taking ARSENIC, *and method of detecting it in the dead body.*—It is a delicate and difficult question, that frequently comes before courts of law, whether a person dying under suspicious circumstances has been poisoned by arsenic. The fact of the evidence relating to the body and the nature of the poison, must be determined by the physician and the chemist; and it is of great consequence that both be fully aware of the appearances on dissection, and of the tests of arsenic. The stomach and bowels show more or less inflammatory appearances, but the inflammation is often so slight that we can hardly think death has arisen from that cause; and Mr. Brodie, who applied arsenic to wounds in animals, observes that the inflammation of the stomach was commonly more violent and immediate than when the poison was administered internally; and he considered the inflammatory appearances as symptoms of the action of the poison on the system; perhaps of its presence in the blood. Hence, a person must not conclude, because he sees too little inflammation to cause death, that arsenic has not been taken. But although the affection of the stomach and intestines from arsenic is not commonly the cause of death, it may become so, provided the patient survive the effects produced on organs essential to life, viz. those produced on the nervous system, and the heart. And it must be acknowledged, that without some more direct proof that arsenic has been swallowed, we cannot pronounce this to be the case from any thing we see in the bodies of those who are said to have suffered from it. For the methods of detecting arsenic by chemical tests, we must refer to the very minute directions given in books of chemistry. These methods

have, by the ingenuity and perseverance of modern chemists, been reduced to a very considerable degree of certainty and simplicity; but they require a great deal of practice and address; and no one who has not paid particular attention to the subject, and who has not a reasonable confidence in his own accuracy and experience, should undertake the investigation of the contents of a suspected dead body in any case which is to come before a court of justice. The directions and cautions necessary on this subject are so minute, that to the general reader, for whom this work is intended, they would be tedious and unintelligible. Dr. Christison of Edinburgh, who has greatly distinguished himself by his researches on this very important subject, has inserted a very valuable paper respecting it in the Edinburgh Medical and Surgical Journal for July 1824, and has treated this and other similar subjects with great ability in his excellent work on Poisons.

When we reflect that the very lowest and most ignorant are familiar with the name of arsenic as a poison, it becomes a matter of serious consideration whether some means should not be devised to keep it from the power of malice and wickedness. We are much disposed to agree with what has been so strongly and properly stated by Mr. Brande, Professor of Chemistry and Materia Medica to the Apothecaries of London. "It is impossible too strongly to represent the evil of which the retention of arsenic in the pharmacopœia is productive. To this alone nearly all the mischievous applications of this virulent poison are to be attributed, for its sale is thus facilitated; and as long as its unlicensed use is permitted for medical purposes, so long will it be the prevailing instrument of self-destruction and murder. Nor are there any plausible grounds upon which its employment in pharmacy can be sanctioned or defended; for there can be little doubt that more harm than benefit has resulted from its administration; and the diseases in the cure of which it has been supposed effective, admit in all cases of safer and more effectual treatment. But even allowing that in some few and anomalous instances of disease it may have proved decidedly serviceable, this is not sufficient to counterpoise the daily evils to which its present commercial circulation gives rise, or to warrant the permission of the unshackled sale of an article of such certain and deadly virulence. The other applications of arsenic, as a poison, for instance, for vermin, for the dry rot, a means to prevent disease in wheat, and its employment in veterinary surgery, are of such obviously hurtful and dangerous tendency, that the propriety of discontinuing them cannot admit of two opinions; for it is thus that arsenic finds its way into culinary vessels, that it gets accidentally mixed with articles of food, that bottles which have contained it are used for beer, wine, vinegar, or medicine; and, in short, that numerous opportunities are afforded to the evil-minded of possessing themselves without suspicion of this deadly weapon; and to the ignorant and careless, of causing the most disastrous and distressing accidents upon record."

ARSENIC *used externally, and Quack Medicines containing it.* It deserves to be particularly noticed, that arsenic applied externally to parts from which the skin has been rubbed off, kills more rapidly than even when given internally. Hence the danger of using various quack ointments, professedly having great powers in the cure of cancer and other complaints, the most active ingredient of which ointments is known to be arsenic. Many cases of palsy, and even of death, have been recorded from the application of arsenical plasters and ointments for various purposes. And even where the skin is unbroken, poisonous effects may be produced. We shall mention some of the quack medicines containing arsenic, that they may be carefully abstained from; the tasteless ague-drop, Plunkett's ointment, the arsenical paste of the French surgeons, Davidson's remedy for cancer

Delcroix's poudre subtil for removing superflous hair in less than ten minutes.

ARTERIES. Firm and elastic canals proceeding from the heart, and gradually diminishing in size as they branch off into numberless divisions through the whole body. They are composed of three coats, a smooth coat internally, a muscular coat in the middle, and a cellular coat externally. The name *Artery* which signifies air-holder, owes its origin to the imperfect observations of the ancient anatomists. When they opened dead bodies, they found certain tubes always empty, because the elasticity of these tubes forced the blood, during the last struggles of life, into the veins and cavities of the heart; hence they believed that in the living body they contained air, and named these tubes arteries. By the arteries, the blood is conveyed from the heart to every part of the body, for the purpose of nutrition, secretion of fluids, and preservation of animal heat. Arteries are for the most part continued in minute subdivisions to the equally minute commencement of the veins; it is probable that there are intermediate cells or follicles between the two sets of vessels; but those are so small as to elude the eye, and even the microscope. At the commencement of the two great arteries, viz. that which conveys the blood to the lungs to be purified, and that which transmits it to the whole system, are placed valves to prevent any retrograde motion. The pulse is caused by the action of the muscular coat, and the elasticity of the cellular coat of the arteries, and it is correspondent in strength and frequency with the beating of the heart. The blood contained in arteries is of a florid red colour; and when an artery is wounded, this florid blood is poured out by jerks; and from an artery not very large, the whole blood of the body would flow out in a very short time. *(See* BLOODLETTING, *accidents from.)*

Arteries are subject to various diseases. They are liable to inflammation, and such an occurrence is attended with great danger. They are also liable to ossification, and other alterations of their structure, and to aneurism. *See* ANEURISM *and* OSSIFICATION.

ARTERIOTOMY. Opening an artery to draw blood for the cure of diseases. Sometimes it is difficult to get enough of blood from a vein, and sometimes in affections of the head it is thought advisable to take blood from some vessel supplying the head; this is commonly done from the temporal artery. Arteriotomy is seldom performed in any other vessel. It is not in general difficult to stop the bleeding from the temporal artery; it is best done by compression, by which the blood is easily sent into some of the communicating branches.

ARTICHOKE, *Cinara scolymus.* A plant native in the southern parts of Europe, but cultivated here for the table. It may have the disadvantage of inducing people to take too much butter. The Jerusalem artichoke, *Helianthus tuberosus,* is a kind of sun-flower, and quite a different plant from the common artichoke It is agreeable for food, but watery and flatulent, requiring a sufficient quantity of salt and pepper to be eaten with it. The word Jerusalem, as applied to this species of sun-flower, is corrupted from *gira sole,* which signifies turning to the sun.

ARTICULATION. The form of a joint; or the method in which the end of one bone is adapted to the part of another, with which it is connected for the purposes of motion. The principal kinds of joints in animal bodies are, 1. Those of the ball and socket kind, admitting of motion in every direction; this is seen in the shoulder joint, and in the hip joint. 2. The hinge joint, as in the fore-arm and ankle. 3. Joints more or less resembling these, or having a combination of them, as the jaw-bone, and the joints of the head, and upper bones of the neck.

ASCARIDES. Small worms which infest the rectum. They are of a yellowish-white colour, resembling thread cut in small pieces. *See* WORMS.

ASPARAGUS, *Asparagus officinalis.* A plant, the root of which has been supposed to have a diuretic property, from the smell which it imparts to the urine of those who eat it; but its powers in this respect seem to be but small. Asparagus has a creeping root, throwing up numerous scaly erect stems which are used as an article of food; they are quickly dissolved in the stomach, and when sufficiently boiled, are not disposed to create flatulence and acidity. Asparagus is said to be wholesome, only when in its early state; when old, it is remarkably acrid.

ASSAFETIDA. A gum resin from a plant growing in Persia, the *Ferula assafetida;* procured by cutting the top of the root across; and when the juice is exuded, it is scraped off, and a second cut is made across. This operation is repeated till the root is entirely exhausted of juice. This drug has a strong disagreeable smell, somewhat like that of garlic, with a bitter acrid taste. It is one of the most valuable and active remedies in spasms, in hysterical complaints, and in irregularities of the monthly discharge. In asthma and other kinds of difficulty of breathing, in hysterical cases, attended with much flatulence and costiveness, assafetida is usefully given; in this last case, joined with aloes, in the pills called the pills of aloes with assafetida, of which two may be given every night or every second night. In the fit of hyterics, a draught of the solution of assafetida will sometimes put a stop to it immediately. When there is costiveness, with much distention of the bowels from wind, or colic pains, a drachm or two of assafetida may be added to a clyster, consisting of about a pint of gruel or infusion of senna, with very good effect. In spasmodic cough, the administration of a mixture composed of thirty grains of assafetida, two ounces of the water of acetate of ammonia, and two ounces of peppermint, may be given in doses of one or two spoonfuls; and the same has also been found of service in hooping-cough.

ASS'S MILK. This has been much famed for its virtues in consumptions, and other diseases of debility. Its advantage arises from its containing a considerable portion of nutritious matter easily converted into chyle, and having less cheesy matter than other milk. It bears a stronger resemblance to human milk than any other; and it contains more sugar than that of the cow. Its proportion of acid is also very considerable. The quantity taken may be from half an English pint to one pint daily. It is very common among the vulgar to recommend rum taken in milk in consumptive cases; this is by no means a safe practice, as the rum is apt to bring on inflammatory symptoms.

ASTHMA. The symptoms of difficult breathing which, in popular language and by careless medical observers, are called by the indiscriminate term *Asthma,* are owing to very different changes in the structure and actions of the respiratory organs. Sometimes, asthmatic symptoms arise from diseases of the heart and large vessels, sometimes from changes in the structure of the lungs, sometimes from the contaminations of the air we breathe, and sometimes from spasmodic affections, which exceedingly distress the patient, but do not hinder him from attaining to extreme old age. The observations in this article are to be understood as applying chiefly to this last species of asthma. For the other kinds of difficult breathing resembling asthma, *see* CHEST, *Diseases of;* HEART, *Diseases of.*

Symptoms of ASTHMA. A painful difficulty of breathing, recurring at intervals, with a sense of tightness across the breast; a wheezing cough, hard at first, but towards the end of each paroxysm more free, and followed by the discharge of a little mucus. The attacks of asthma are generally in the night-time, though they sometimes come on in the course of the day; and at whatever time they come on, it is for the most part suddenly, with a sense of tightness across the breast, impeding

respiration. The person, if in bed, is obliged immediately to get up, and he requires the free admission of air. The difficulty of breathing increases, and is performed slowly, and with a wheezing noise. These symptoms sometimes continue for hours together; and a remission takes place by degrees; the breathing becomes less laborious, and the patient speaks and coughs more easily; and if there is something expectorated, the remission is greater, and sleep comes on. In the morning, and through the day, though the breathing is better than during the fit, it is not yet free from difficulty; a degree of tightness is still felt, and a very slight motion of the body is apt to bring back the paroxysm. In the evening the breathing is worse, and about the same hour as on the former night, generally between midnight and two o'clock, the same train of symptoms is renewed. After the fits have recurred for several nights in this manner, they suffer more considerable remissions; and for some time asthmatics may be free from complaint; but through the whole of life, the paroxysms are ready to return, though in different circumstances in different patients.

Asthma seldom appears before the age of puberty, and seems to attack men more frequently than women; and in persons of a full habit whom it continues to attack, it commonly causes a great degree of emaciation. Though it does not often destroy life in the paroxysms, it may become fatal by passing into other diseases, as into consumption of the lungs, or by occasioning dropsy; and many cases, which have appeared a common spasmodic asthma, have been found at last to depend on organic diseases of the heart and great vessels.

Causes. Some have the fits of spasmodic asthma brought on by heat, whether of the weather or of warm apartments; and frequently by warm bathing. Some are hurt by cold and moist air, or by any thing worn tight about the breast, or by distention of the stomach from a full meal, or windy diet; or from exercise hurrying the circulation of the blood. Sometimes the disease is brought on by causes affecting the nervous system, as passions of the mind; or by particular smells, or irritations of the lungs from smoke or dust.

Treatment during the fit. The painful and alarming symptoms of an asthmatic fit, seem to the patient and bystanders to threaten instant dissolution, but it rarely happens that immediate death occurs; yet something must be speedily done to relieve such intense suffering. In cases where the fits have only recently begun to attack, if the patient is strong and full of blood, it may be proper to take away a portion, but it is obvious that this would not do in cases where a fit comes on several times in a day, or for several successive nights; and, therefore, other means are to be employed for cutting short the fit. One of the most efficacious means of doing this is, to give a draught containing thirty-five drops of laudanum, with an equal quantity of ether, in an ounce of water; or to inhale the steam of warm water, or an infusion of chamomile flowers with the addition of a little ether. In absence of other means, a cupful of very warm water may be drank. Assafetida may also be administered in the dose of a table-spoonful of a solution made by dissolving ten grains in six ounces of water, and adding a little peppermint or dill water. Persons liable to asthma should at all times be careful to avoid flatulent articles of food, and never to overload the stomach. Every patient in asthma must observe what kind of air agrees best with him; and must manage his residence accordingly. Some agree best with the smoky loaded atmosphere of cities, and are made worse by the pure air of the country; while others experience directly the reverse.

Of late years much has been talked of the virtues of the *Datura Stramonium* or thorn apple, in the relief and cure of asthma. The roots are dried, and beaten so as to separate the fibres; and these cut

into small pieces are smoked in a common tobacco pipe. It may have given relief in some cases, but it has not justified the high praises bestowed on it at its first introduction. Dr. Bree, one of the latest and best writers on asthma, says, "the indiscriminate use of the smoke of stramonium has occasioned dangerous or hurtful effects in frequent instances. In some cases of aged or apoplectic subjects, death has been the consequence." It doubtless acts as a narcotic; and in overdoses, it produces the usual alarming symptoms of this class of poisons.

ASTRINGENTS. Substances that draw together, or corrugate and contract the parts of the body to which they are applied, and which, in many cases, seem by sympathy to extend their action to very distant parts. The chief of these are, alum, catechu, oak bark, logwood, acids when properly diluted, kino, carbonate of lead, nitrate of potash, dragon's blood, rose water, tamarinds. It will be seen from this enumeration, that astringents are procured from various sources, and that they do not agree in their chemical properties. The astringency of many substances is best known by the peculiar harshness and roughness imparted to the palate when they are tasted. Cold appears to act as an astringent. The action of astringents is useful in checking certain excessive discharges, and in some cases of purging they are useful; but it requires a skilful director to know in what cases to employ them, as most injurious effects have resulted from the ignorant and indiscriminate use of them. In the disease called dysentery, there are very frequent slimy discharges from the bowels, or frequent vain attempts at stool; this appears a prominent distressful symptom, and the patient and his friends think all would be well if this could be got the better of; accordingly, logwood has been ordered to stop the looseness; but with the certain effect of aggravating the disease, and probably rendering it fatal. Astringents are useful in long continued laxity of the bowels, where there is no deficiency of the proper excrementitious matter, and where means have been taken to cure the original disease. A good form in such cases is the infusion of catechu made by adding a drachm of that substance to a pint of boiling water, allowing it to cool, straining it, and mixing a little cinnamon water; of this mixture, a tea-cupful is to be taken three or four times a day. In some external sores, where there has been a long continued discharge of thin lymph, astringent washes are of good effect. These may be made of a decoction of oak bark, or a solution of two grains of the sulphate of zinc to the ounce, with a few drops of diluted sulphuric acid, or diluted acids themselves. The same applications, made somewhat stronger, are also useful in some bleedings, as those from the nose, and in too great or long continued flow of the menses.

ATHLETÆ. *See* TRAINING.

ATMOSPHERE. The mixed aerial fluid, which, for a considerable height, surrounds our globe. For an account of the substances contained in it, and its necessity for the breathing of animals, *See* AIR.

ATONY. A term signifying the loss of tone, or power of contracting in the fibres destined for motion, or the performance of any function. The effect of this is weakness and relaxation; thus we speak of an *atony* of the stomach, or we say the bowels have lost their *tone*, or the *tone* of the muscles is diminished.

ATROPA BELLADONNA. *See* DEADLY NIGHTSHADE.

ATROPHY. A disease, of which a very prominent symptom is wasting of the body, from deficiency of nourishment. It is well known to the nurses in Scotland by the term *Dwining*. It is very common in children, and proceeds in them from various causes; from teething, from acidity of the stomach, and disorder of the bowels, from rickets, from diseases of the glands of the mesentery; and this last cause is by far the most common. The patient is at first languid and

inactive; has a bad appetite, a disagreeable breath, a pale complexion, a large belly; the bowels are not regular, sometimes costive, at other times loose; the stools smell badly, and are of a whiter colour than natural. When the disease has continued for some time, the body becomes greatly emaciated, the belly still more swelled, and the digestive functions more disordered. The best treatment consists in putting into execution the tonic plan, after directing our curative means to the original disease. Thus, if difficult teething be the cause of the complaint, the gums should be scarified, or other proper means taken to relieve them. The bowels ought to be particularly attended to. Purges ought to be given of calomel and rhubarb, and of senna occasionally, or of castor oil, varying them when they seem to lose their effect. Exercise in the open air, going to the country, sea-bathing, a moderate allowance of wine, with nourishing diet in small quantities, frequently repeated, are useful. The belly should be rubbed with camphorated oil, or with warm olive oil; and, in some cases, even mercurial ointment might be used with good effect.

AXILLA. The arm-pit.

AXUNGE. A name for hog's lard.

AZOTE. A gas which forms a large proportion of the atmosphere, 100 parts of which contain 79 of azote. It extinguishes flame, and is hostile to animal life; hence the name given to it by the French chemists, which signifies destructive of life. Some later chemists call it *nitrogen*, from its being an ingredient in nitric acid. Though azote is principally described by negative properties, it is a gas of great importance. Mechanically mixed with oxygen in the air we breathe, it tempers the too great stimulus of that gas; combining with oxygen in a closer union and in other proportions, it forms nitric acid, and other acids of remarkable properties; and united with inflammable air (hydrogen) it constitutes the volatile alkali. It is an abundant ingredient in the composition of the muscles and some other parts of the animal body. Azote was discovered by Dr. Rutherford in the year 1772.

B

BACK, PAIN OF. *See* LUMBAGO.

BALSAM. This term is now generally restricted to signify compounds of resin and benzoic acid; but in the shops, and in common discourse, is applied to some substances that are not strictly so compounded, which is the case with the article next mentioned, as it contains no benzoic acid, but consists of resin and essential oil.

BALSAM OF COPAIVA is obtained by wounding the bark of a tree, the *Copaifera officinalis*, which grows in the Brazils, and in some of the West Indian islands. It has the consistency of oil, but it is more viscid and glutinous; it has a pale yellow colour, an aromatic odour, and a pungent nauseous taste. Copaiva has been much used in the cure of gleets, of the whites, and of similar discharges, where there is not much active inflammation. Of late it has been thought of service to those who are troubled with piles. It may be given in doses of fifteen to forty drops, twice or thrice a-day, in water, or rubbed into an emulsion with gum arabic or the yoke of an egg. When given for the cure of piles, it is in doses of a drachm three times a-day, and in this dose it commonly purges. A little aromatic water, or a drop or two of some volatile oil, as cinnamon or peppermint, may be taken with each dose, to prevent the

sickness which copaiva occasions in some people.

BALSAM OF PERU. This is obtained by boiling in water the twigs of a tree which grows in South America, the *Myroxylon peruiferum*. It is of a brown colour, a fragrant aromatic smell, and a pungent bitterish flavour. This balsam has been recommended in doses of from half a drachm to a drachm, as a stimulant in chronic rheumatism. It may be given diffused in water by means of mucilage, or made into pills with some vegetable powder. It is said also to be a useful expectorant in chronic asthmas, and old dry coughs, but it should not be employed where there is any inflammatory action.

BALSAM OF TOLU. This balsam is also obtained from South America, from the *Toluifera balsamum*. It has an agreeable smell and taste, and is supposed to be expectorant; but it is now principally used to give a pleasant flavour to syrups, lozenges, and mixtures for coughs. The Balsam of Tolu is one of the ingredients in the vulnerary balsams, intended to imitate what was once so famous under the title of Wade's Balsam, Friar's Balsam, Jesuit's Drops, &c. But it is not easy to say what advantage can be got from the application of such compounds to a recent cut, in which the vulgar commonly recommend them.

BANANA, *Musa sapientum*. The PLANTAIN OR BANANA TREE. This tree is cultivated in all the islands of the West Indies, and on a very extensive scale in Jamaica, where it would be difficult to find any species of provision that would supply its place. Even flour, as Dr. Wright says, or bread itself, would be less agreeable, and less able to support the laborious negro. Plantains also fatten horses, cattle, swine, dogs, fowls, and other domestic animals. The leaves are employed as dressings after blisters; and the water from the soft trunk is astringent, and used to check diarrhœas. There is another sort, the *Musa paradisiaca*, of which the fruit is shorter, straighter, and rounder; the pulp is softer and of a more luscious taste. It is eaten either raw, or fried in slices as fritters.

BANDAGES. Pieces of linen, cotton, or flannel, intended to bind or surround some part of the body for surgical purposes, such as the securing of dressings, or confining the motion of parts that would be painful or injurious. Bandages are sometimes used to give a moderate degree of pressure on dropsical limbs. Supposing the inferior extremities are to be bandaged, care must be taken that the pressure be equally begun from the toes, and carefully carried up so as not to allow the limb to swell below the binding, or between its turns. The surgeon himself should always put on the bandages for swelled legs. In ulcers, bandages support the dressings, defend the newly formed skin from any force that might separate it, and bring the edges of the ulcers together. Bandages are employed in wounds to keep the parts together; and in fractures, to retain the limb and splints in their proper position. A bandage, called the T bandage, is useful in many cases to be worn round the belly. It consists of a broad bandage to go round the middle, which is crossed by another attached to it before, and brought up between the thighs, to meet it behind. A bandage having turns like the figure 8, is used in binding up the arm after bloodletting. For the various forms of bandages, we refer to books of surgery; and only mention here, the necessity of the young practitioner exercising himself much in putting bandages on a block or other proper figure, to acquire neatness and dexterity in their application.

BAREGE WATERS. The village of Bareges is situated on the French side of the Pyrenees, half-way between the Mediterranean and the Bay of Biscay. There are four hot springs, differing in their temperature, and in the quantity of sulphur; the hottest containing the strongest impregnation. The coolest is about 73°, and the hottest 120° of Fahrenheit. They dissolve soap, and render the skin

very supple and pliable; they are resorted to for the cure of tumours of various kinds, and of stiffness and contraction of the tendons or joints left by rheumatic or gouty affections. They are highly useful in eruptions on the skin. Taken internally, the waters of Barege are useful in disorders of the stomach, attended with sourness and heart-burn; and also, in certain affections of the urinary organs.

BARK. When used without any addition, Bark signifies the celebrated medicine obtained from South America, and known by the name of Peruvian Bark, or Jesuit's Bark. It is the bark of certain trees called by botanists *Cinchona;* and of its numerous species there are three more particularly used in medicine. Its medicinal virtues are said to have been discovered by the following circumstance. Some Cinchona trees being blown into a pool of water, remained there long enough to make the water so bitter, that the neighbouring inhabitants desisted from using it. One of them, in a paroxysm of fever, happened to drink of it and obtained a speedy cure. Others who were ill, made use of the same remedy, and found it equally successful. A remarkable cure having been performed in 1638, on the Countess of Cinchon, wife of the Spanish viceroy at Lima, it came into general notice, and from this lady the plant derived its present generic name. The species now called *lancifolia*, (formerly *officinalis*) is that which furnishes the pale or common Peruvian bark of the shops. It is imported chiefly in rolled up pieces or quills, mixed with larger and flatter pieces. The small and fine quilled pieces are considered as the best. This bark is covered with a grey outer skin, internally it is of a deep cinnamon colour. Its smell, when fresh, is peculiar, and slightly aromatic; its taste is harsh and bitter. This is the species which has always been most esteemed in the cure of agues, and in the treatment of diseases attended with debility; and it is deservedly reckoned superior to all other tonics and bitters.

In the cure of ague, the Peruvian bark is a medicine nearly infallible. It should be taken in substance, and in sufficiently large doses, in the intervals of the fits; when given in the paroxysms, it is apt to disagree with the stomach. A large teaspoonful should be taken every two hours; it may be mixed with water, or with milk; and this persisted in, till the fits postpone the period of their attack, or cease to return altogether. By some stomachs it is apt to be rejected, and various contrivances have been fallen upon to obtain its virtues in a concentrated form, such as would not disagree with the stomach; the tincture has been tried, but it is quite insufficient for the cure of intermittent fever; and, with more confidence, the extract has been employed. This is prepared by boiling the powder and evaporating to a proper consistence; it is believed that a great proportion of the active ingredients of the bark is obtained in this form, but in all probability there must be much loss of them in the preparation; the extract may be given in the form of pills, or of bolus, in the dose of from ten to twenty grains. The decoction of bark is made by boiling an ounce of the powder of bark for ten minutes in a pint and a half of water, and straining the liquor; the dose of the decoction is one or two ounces, repeated according to the effect intended; if for the cure of agues, in the same frequency as the powder; if for debility, it need not be so often used. The infusion of bark generally sits well even on stomachs that will not bear the bark in substance. It is made by pouring a pound of water upon an ounce of bark in powder, and allowing it to stand for twenty-four hours. The dose is the same as of the decoction, from one to three or four ounces. The dexterity of modern chemistry has succeeded in obtaining the virtues of the bark in a very concentrated form. In the pale bark there is found a substance called *Cinchonin* or *Cinchonia*, and in the yellow bark a substance called *Quinine* or *Quina*, which are analogous to each other, like the alkalis potash and

soda; and like them are capable of combining with acids. Quinine, united with the sulphuric acid, forms the sulphate of quinine, of which eight grains are considered equivalent to an ounce of bark. A wine of quinine may be formed, by adding five grains of the sulphate to a pint of sherry; and a tincture, by dissolving the same quantity in eight fluid ounces of rectified spirit. We have thus a very easy and manageable way of exhibiting the bark; and it seems to have been ascertained by experiment, that these concentrated preparations of the bark are not, like those of some other vegetable substances, possessed of deleterious properties, but may be safely used in the cure of diseases; and we are thus enabled to employ the bark in the complaints of children, where formerly it was so difficult to get them to take it in sufficient quantity. Besides intermittent fever, bark has been used in a great variety of ailments; and another instance of its remarkable efficacy is seen in the treatment of gangrene and other putrid diseases. In gangrene, we can hardly be too desirous to get the bark thrown into the system in large quantities; and unexpected benefits sometimes result from it. In gangrene, accompanied with debility, and in putrescent fevers, port wine should be taken at the same time with the bark. In the high excitement which sometimes co-exists with gangrene, and in typhoid diseases, while the skin is hot and dry, and high inflammatory symptoms are present, it is dangerous to use the bark, and more especially to conjoin it with wine. In all cases where we intend to continue the bark for some time, it is wise to begin with clearing out the stomach and bowels by an emetic and a purgative; then to take care that it does not disorder the stomach, or pass off by stool, as it is in some constitutions ready to do. Where the bark proves purgative, a small dose of laudanum, as ten drops, or one-fourth or half a grain of solid opium may be given with each dose.

The diseases in which bark is usefully employed are very numerous; chiefly those accompanied by debility and putrescency; and for these symptoms the bark is an excellent remedy. In bad small-pox, when there are both typhoid symptoms, and a gangrenous tendency, the bark has been extensively used; but as it frequently occurred in children, it was very difficult, before the discovery of quinine, from the disagreeable taste of the bark, to get them to swallow a sufficient quantity. It is best given to children in some sweet liquid; or in the form of glysters, though with much inferior efficacy. Quinine, however, will render those expedients unnecessary. In consumption, it has been given; but its tendency to disagree with the stomach, and to increase inflammatory symptoms, require much caution in its exhibition. It is generally prudent to discontinue the use of bark when a cough is present. It has been given in rheumatism, but it is quite necessary to premise bleeding and other means for reducing inflammatory action, before the bark is prescribed.

In all diseases that appear to come periodically, and to have some of the habits noted in intermittents, the bark is highly useful; of this nature are certain headachs, pains of the limbs, spasms, and coughs. In gangrenous sore throats, the bark should be given internally; and a gargle made of the decoction is to be used. In passive hæmorrhages, and in dropsy, when seeming to arise from general debility, without any local disease, it is usefully alternated with diuretics, and the other means used for the evacuation of the water. Some form of the bark is useful in stomach complaints, either alone or combined with sulphuric acid or iron.

BARLEY, *Hordeum Distichon.* An annual plant, cultivated in almost every country of Europe. Pearl barley is prepared by grinding off the husks of rough barley, and forming the grain into little round granules of a pearly whiteness. In this state, barley con-

sists almost solely of starchy matter; it forms an excellent article of nourishment, and the decoction, commonly called barley water, is one of the best drinks in feverish diseases.

BARLEY WATER. As good barley water, however humble it may appear, is one of the most important articles with which the sick are conversant, we give here, from the Cook's Oracle, two receipts for its preparation. "Take a couple of ounces of pearl barley, wash it clean with cold water, put it into half a pint of boiling water, and let it boil for five minutes; pour off this water, and add to it two quarts of boiling water; boil it to two pints and strain it.

"The above is simply barley water; to a quart of this is frequently added, two ounces of figs sliced; the same of raisins stoned: half an ounce of liquorice, sliced and bruised; and a pint of water. Boil till it is reduced to a quart, and strain. These drinks are intended to assuage thirst in ardent fevers, and inflammatory disorders, for which plenty of mild diluting liquor is one of the principal remedies; and if not suggested by the medical attendant, is frequently demanded by honest instinct, in terms too plain to be misunderstood. The stomach sympathizes with every fibre of the human frame, and no part of it can be distressed, without in some degree offending the stomach; therefore, it is of the utmost importance to soothe this grand organ, by rendering every thing we offer to it as elegant and agreeble as the nature of the case will admit of. The barley drink, prepared according to the second receipt, will be received with pleasure by the most delicate stomach."

BARYTA. The name of an earth, remarkable for its great specific gravity, and for furnishing an ingredient of some salts which have been recommended in the treatment of scrofula. Of these, the principal is the muriate of baryta, the dose of which is from five to fifteen drops of the saturated solution in distilled water, taken twice or thrice a-day. As all the preparations of baryta are acrid and poisonous, their exhibition must be conducted with due caution.

BASILIC VEIN. The large vein that runs in the inner side of the arm.

BASILICON. The ointment called in the Pharmacopœia, Unguentum resinæ flavæ; useful for dressing sores when they continue long getting neither better nor worse, but as surgeons speak, become indolent; or when it is wished to promote a slight discharge of purulent matter from them.

BATH. The name of a town in England, famous for its medicinal waters. The temperature of these waters is higher than any other in this kingdom, being from 112° to 116°. There are three principal springs, the King's Bath, the Hot Bath, and the Cross Bath, which differ but little in their sensible and medicinal properties. When the water is newly drawn, it appears clear and colourless, without any sparkling or effervescence. After being exposed for some hours to the open air, it becomes a little muddy, by the subsidence of a pale yellow precipitate. The water has very little smell, but when hot from the pump, it affects the mouth with a strong chalybeate impression, without being saline or pungent. When cold, this chalybeate taste is almost entirely lost. The water of the King's Bath, which is commonly preferred for drinking, is about 116°, when fresh drawn in the glass. In the bathing vessels, it is from 100° to 106°; and in the Cross Bath pretty stationary from 92° to 94°. There is a slight portion of carbonic acid, but no trace of sulphur.

The medicinal effect of the Bath waters is thought by some physicians to depend merely on their steady temperature; but they certainly appear to have some specific effects, which cannot be obtained from any imitations of them. The Bath water, when drunk fresh from the spring, quickens the pulse, increases the heat, and promotes the different secretions. One of the most salutary effects of these waters is to increase the

flow of urine, even when taken in moderate doses. Its operation on the bowels varies in different individuals, but its general tendency is to produce costiveness: probably by its promoting perspiration, and not by any direct undue influence on the bowels. Where it is likely to agree with the patient, there is at first a pleasant glowing sensation in the stomach, followed by increase of appetite, and flow of urine; but where there occur headach, thirst, sickness, without any increased discharge, the use of the water must be discontinued.

The diseases for which invalids resort to Bath are numerous and important; and the cases which call for the use of its waters are those in which a gentle, gradual, and permanent stimulus is required; and, on the other hand, those waters are to be avoided in all cases where there is over-action of the system, or tendency to inflammation. Various chronic diseases of great obstinacy are found to yield to a persevering use of the Bath waters. They are commonly used as a bath externally, at the same time that they are drank as a medicine. They are of service in the unhealthy and pallid look, which in young women indicates the obstruction of the menstrual discharge. In palsy, which proceeds from previous apoplexy, or when the fulness of the bloodvessels indicates the approach to that disease, the use of the Bath water is improper, on account of the stimulus it imparts. When the plethoric state of the system is removed by proper means, the bath may be used. In gout, great benefit is derived from the water, where irregular affections of the head, stomach, and bowels occur; and when by the use of the bath, some degree of active inflammation is brought out on any limb, the other symptoms are much relieved. But when the tendency to gout is very strong, when its relapse is easily brought back, whether by irregular living, or by the use of the many nostrums and specifics for gout which are imposed on the credulous; when there is fulness of the system, or obstructed liver, the use of the Bath waters, whether internal or external, is to be forbidden. When the water is found to be too stimulating, it may be tried without its chalybeate impregnation, which is easily accomplished, by exposing the water to the air for a few hours, and then heating it to any temperature that may be required. In affections of the digestive organs of those who have resided long in warm climates, and where the liver and secretion of bile are deranged; also in jaundice, and the colic and palsy arising from the poison of lead, the Bath waters are beneficial. The external use of the waters is prescribed in the same diseases as the internal; and in some cases the external use alone will be sufficient. When the joints are thickened and stiff from chronic rheumatism, the water may be pumped upon them, the number of strokes being increased or diminished according to the age, sex, strength, or other circumstances of the patient. This is called dry pumping, from the rest of the body being dry, except that part on which the water falls. In chronic rheumatic complaints, much good is done by the waters.

The activity and power of the Bath waters render it necessary that in every case a medical man be consulted *immediately before their use*, as such only can judge whether the diseases present, and the state of the constitution at the time, admit their employment. When invalids, who are not greatly debilitated, repair to Bath, much of the improvement of their health no doubt depends on the change of scene and manner of life, on the laying aside of their usual habits and employments, and on the means afforded for exercise and amusement. The best season for using the Bath waters is in the spring and autumn.

BATH, COLD. Water applied to the body between the temperature 65° and 32°, produces the sensation of cold, which gradually ceases, and is succeeded by a glow of heat. Shivering is at first brought on, and the skin becomes pale

contracted, and covered with little eminences, making it resemble the skin of a newly plucked goose; hence its physiological name in that state, *cutis anserina*. The breathing is rendered quick and irregular; the pulse slow, firm, and small. The heat of the internal parts is at first diminished, but gradually returns nearly to its natural standard. The perspiration is suppressed, and the urine is rendered more copious. If the cold be excessive, long continued violent shiverings are induced, the pulse ceases at the wrist, the motion of the heart becomes feeble and languid, there is a sensation of faintness and coldness at the stomach, the heat diminishes rapidly, and at last delirium, numbness, and death ensue. If the cold be not so great, and if the application of the bath be not too long continued, or if these circumstances are not disproportioned to the strength of the person bathing, he feels on emerging from the water an agreeable glow of heat over the whole body, and is refreshed and invigorated. A person should be careful not to venture into the water while he is much fatigued, or while he is perspiring; but a certain degree of vigour and warmth of the body is necessary to insure that glow of re-action which is one evidence of the cold bath being salutary; and some degree of heat should be felt before going into the water. It is an unwise practice, therefore, though a very popular one, to sit on the brink of a river, or of the sea, in order that the bather may not go into the water too warm. By this he is apt to get chilly and languid, and not in a state to derive benefit from bathing. A very beautiful and satisfactory illustration of the difference between taking the cold bath when one is vigorous, and when one is debilitated or exhausted, is related by Dr. Currie of Liverpool. "On the first of September, 1778, two students of medicine at Edinburgh, set out on foot on a journey, a considerable part of which lay along one of the rivers of Scotland. They started by sunrise, and proceeded with alacrity in the cool of the morning. At the end of eight miles they breakfasted, rested for an hour, and then resumed their journey. The day grew warm as it advanced; and after a march of eight miles more, they arrived, heated, but not fatigued, on the banks of the river abovementioned, about eleven in the forenoon. Urged by the fervour of the day, and tempted by the beauty of the stream, they stripped instantly, and threw themselves into the river. The utmost refreshment followed: and when they retired to the neighbouring inn, this was succeeded by a disposition to sleep, which they indulged. In the afternoon they proceeded, and travelling sixteen miles farther at a single stretch, arrived at the inn where they were to sleep, a little after sun-set. The afternoon had been warm, and they sweated profusely; but the evening was temperate, and rather cool. They had travelled for some miles slowly, and arrived at the end of their journey stiffened and wearied with their exercise. The refreshment which they had experienced in the morning from bathing, induced, however, one of them to repeat the experiment; and he went perfectly cool into the same river, expecting to relax his limbs in the water, and afterwards to enjoy profound sleep. The consequences were very different. The Tweed, which was so refreshing in the morning, now felt extremely cold; and he left the water hastily. No genial glow succeeded, but a feverish chill remained for some time, with small frequent pulse, and flying pains over the body. Warm liquids and friction brought on, at length, considerable heat; and towards morning, perspiration and sleep followed. Next day, about noon, they proceeded on foot; but the traveller who had bathed was extremely feeble; and though they had to perform a journey of a single stage only, as some part of it was difficult and mountainous, he was obliged to take the assistance of a carriage which overtook them on the road. It was several days before he recovered his usual vigour."

Application of the COLD BATH *to the Cure of Diseases.*—The above incident may furnish us with some very useful hints for the use of the cold bath in cases of disease. We see from it that there must be a certain degree of vigour in the system to produce the proper re-action after the cold is first applied, otherwise it is sure to produce bad effects. We have stated very fully, under the article AFFUSION, the use that may be made of the cold bath in the cure of febrile diseases. It has also been employed with success in chronic rheumatism, in some species of mania, and in palsy. In debility of any particular part, partial cold bathing may be applied, by pouring water from a height. As a mode of strengthening the constitution, either when it is feeble by nature, or weakened by previous disease, the cold bath is highly useful. There are some habits of body and some tendencies to disease which render it unsafe to use the cold bath; some feel a degree of cold and shivering for a long time after coming out of the water; others have headach for a great part of the day. In such cases, it does not appear that much good is to be expected from bathing. In cases where there is a tendency to apoplexy, or flow of blood to the head, it is unsafe to try cold bathing; and also when there is any tendency to consumption, or other complaints within the chest, it is prudent to abstain from this practice.

Mode and Time of BATHING. Though it is wrong to apply the feet and lower parts slowly to the water, it is an equally unsafe practice to go in suddenly with a plunge over the head; as the shock to the nervous system may produce fainting, and in some persons not very vigorous may even be fatal. It is sometimes necessary to prepare the body gradually for a course of sea-bathing, by the use of the tepid bath for a week or two, diminishing the temperature a few degrees each successive time. It is proper at the commencement of such a course, that invalids should not go into the sea every day, but every second day. The best part of the day for bathing being the morning, before breakfast; but when the weather is not very warm, or when the bather is somewhat debilitated, it may be better to bathe in the forenoon. A person in full health and vigour may bathe almost at any period, but those labouring under stomach complaints should not go into the water until they are somewhat invigorated by taking food in moderate quantity. The best time for such persons seems to be about two hours after breakfast. It is bad to use the cold bath soon after a very full meal. It is not right to stay too long in the water; a few immersions, and a few turns by those who can swim, are sufficient. If any feebleness arises from staying too long in the water, some warm wine and water, or some warm gruel, or tea, drank when the patient is laid between blankets, will probably restore the proper heat.

The best time of the year for bathing is that in which the weather is mild and settled; and hence, in this country, bathers ought to wait till the long prevailing easterly winds of our spring have decidedly given place to more genial breezes. September seems to be the month that should finish the bathing season. The sea is best for the cold bath, by the uniformity of its temperature, the agitation of the waves, and the stimulus left by the salt on the skin.

BATHS, MEDICATED. These may be either liquid or vapour, and are made by adding some medicinal substance to the common baths. The fluid ones are chiefly imitations of the natural mineral waters, of the sulphureous or chalybeate kind; and they are principally used in diseases of the skin and joints, and in rheumatism. The ingredient which is thought most beneficial, whether sulphur, iron, or other substance, may be added in larger quantity, according to the desire of the prescriber and the effect wanted. In some venereal complaints, when it is wished to introduce mercury very speedily into the system, a quantity of cinnabar has been burned, and the patient thus

exposed to a vapour bath; and for the same, and also for cutaneous affections, the nitro-muriatic acid bath has been used, in the proportion of three or four ounces of acid to twenty gallons of water. These baths should always be prescribed and superintended by a medical man.

BATH, SHOWER. This is a particular method of applying the cold bath, by allowing a broken stream of water to fall on the head. The shock is pretty severe at first, but for those who have strength of body and resolution to persevere in it, it acts as an excellent bracer; and is free from many of the dangers likely to arise from the blood being sent to the head, which it is in danger of being, when the lower parts are first immersed in the water. For many people, it is a good practice to raise the water to the temperature of 50°.

BATH, VAPOUR. In this, the patient is exposed to the vapour of water, either alone or medicated with various impregnations. It is more used on the Continent than in Great Britain; but of late years has been more frequently employed in this country than formerly. The first remarkable effect of the vapour bath, is to excite profuse sweating. It is recommended in the cure of rheumatism and of gout. It has been found of speedy and striking benefit in obstinate diseases of the skin, and it is also recommended in ulcers, in chilblains, and in dropsy; its power in relaxing stiff joints is wonderfully great. In Russia, it is used as an article of luxury, the vapour being heated so high as 150°; and, what we should think destructive to the constitution, from being exposed to vapour at this high temperature, they proceed to roll themselves in the snow, or plunge into cold water, which they do with impunity. There is little fear of their example being imitated in this country.

BATH, WARM. Water of the temperature between 97° and 85° applied to the body constitutes the warm bath, which is uniformly to be considered as diminishing the heat of the body, although the first sensation experienced on going into the bath is that of warmth. The warm bath diminishes the frequency of the pulse, especially when it has been greater than natural; and this effect is in proportion to the time of being in the bath. It renders the breathing slower, relaxes the muscles, increases the bulk of the fluids, removes impurities from the surface, promotes the scaling off of the scarf skin, and softens the nails, corns, or other hardnesses of the skin. The warm bath is very usefully employed where there is great heat of the surface, and frequency of the pulse. Its relaxing powers are very serviceable in cases of rupture, suppression of urine, and spasmodic affections of the bowels. There are many other diseases in which the warm bath is very beneficial. In the numberless diseases of the skin, it not only does good itself, but prepares the skin for the application of other remedies. It is good in rheumatic affections, and in palsy. In small-pox, measles, and chicken-pox, where there is much fever, and long delay of the eruption coming out, the warm bath both relieves the fever, and brings out the eruption in a kindly manner. When by cold, or by improper treatment, the eruption has disappeared, and bad effects are produced on the lungs and other internal parts, the warm bath is our most powerful assistant in bringing out the eruption again, and relieving the dangerous symptoms. In the feverish diseases of children, arising from teething or disorder of the bowels, the warm bath is an excellent remedy. The child should be immersed in water of a suitable temperature, say from 70° to 80°, up to the neck, and kept in the water for about five or seven minutes; then wiped dry, and put to bed, when it seldom fails to be much relieved of feverish symptoms, and to fall into a refreshing sleep. By patients labouring under stomach complaints, and who are too much debilitated to use the cold bath, much benefit may be derived from a prudent use of the warm bath. The temperature at first

should not be above 94° or 95°, and it should always be regulated by the thermometer. The best period for such patients to use it, is an hour or two before dinner. They may remain in the water for about twenty minutes, and may take a little exercise afterwards, but not so much as to fatigue. It is commonly supposed that a person on coming out of the warm bath is more than usually susceptible of cold, but experience has satisfied the most accurate observers that such fears are groundless, and that it is unnecessary either to make any alteration in the clothing, or to avoid the common exposure to the air.

BEAN, *Vicia faba.* A well known esculent pulse, very nutritious to those whose stomachs are strong and able to digest them, but apt to breed flatulence in delicate stomachs, unaccustomed to strong and coarse food. When young and succulent, they are a favourite accompaniment to bacon. *See* PEASE.

BEE, STING OF. Sometimes very painful symptoms arise in consequence of a sting from a bee, such as great swelling extending to the neighbouring parts, and even over a whole limb, thirst, restlessness, and other feverish symptoms. When an enraged swarm attacks a person, the consequences may be very alarming indeed. Such accidents are to be treated by cooling local applications, as solutions of hartshorn in cold water, in the proportion of twenty grains of the carbonate of ammonia to six ounces of water; or what is commonly sold by the name of hartshorn, or vinegar and water, may be applied; or the muriate of ammonia (sal ammoniac) dissolved in water, or lime juice. Laxative medicines of the cooling kinds, as Epsom salts, Rochelle salts, or cream of tartar, are to be given, and the patient to be kept at rest in a cool place and on a spare diet.

BEEF, in its various modes of dressing, is one of the most commonly used and nutritious articles of diet. It is probably not quite so easily digested by the generality of people as mutton is, but the difference between them is not great. It may be used as an article of diet by those who are recovering from debilitating diseases, observing the usual precautions about the quantity taken, and the modes of dressing it. Beef-steak seems to be the form in which its nutritious powers are best retained. The unnatural loads of fat which are accumulated on what is called *prize beef,* add nothing to its goodness, and are best melted away in the cooking.

BEEF TEA. As this is one of the most important restoratives for persons recovering from sickness, and for many cases of actual illness, we subjoin from the Cook's Oracle a receipt for making it in perfection: "Cut a pound of lean gravy meat into thin slices, put it into a quart and half a pint of cold water, set it over a gentle fire, where it will become gradually warm; when the scum rises, let it continue simmering gently for about an hour, then strain it through a fine sieve, or a napkin, let it stand ten minutes to settle, and then pour off the clear tea."

BEER. A liquor used in almost every country, and made in the earliest times. Without describing the process of brewing, we shall merely mention that beer, from its slight bitterness, is a good assistant in digestion. It tends to obviate costiveness; but when it is stale and hard, it is very apt to disturb the bowels considerably. It may be allowed as a drink in many feverish disorders, with the precaution merely of not giving it very cold. When there is much flatulence in the bowels, we must be cautious in its use. Good small beer may be allowed to children when their bowels are in good order.

BEES' WAX. It is generally supposed that bees only collect wax from flowers, but from the experiments of Huber it appears that they make it. It forms the cells in which they deposit their honey. After the honey-comb has been completely drained, it is washed, melted in boiling water, and strained, then cast into cakes. Fresh wax has a

bright yellow colour, no taste, and a smell like honey. Yellow wax is used in medicine only for the preparation of external applications. Yellow wax is cut into thin cakes, and after being bleached by long exposure to the sun and air, is again melted and sold in the form of thin round cakes. White wax is added to oily applications, to give them consistency.

BEET-ROOT, *Beta vulgaris.* The root of a plant of a sweet taste and beautiful red colour. It forms a good pickle with vinegar, and may be considered as an antiscorbutic. In some parts of the Continent, a considerable quantity of sugar is extracted from this plant; and it is said that if the roots be dried in the manner of malt, tolerable beer may be made from them.

BELLY. *See* ABDOMEN. When we speak of a bound belly, or a loose belly, we mean the state of the intestines with respect to costiveness or laxity; and when we speak of a pendulous belly, we mean that the skin and muscles of the abdomen are relaxed and hang forward.

BENZOIC ACID, or FLOWERS OF BENJAMIN. An acid which exists in several balsams, particularly in that called Benzoic, procured from Sumatra. Benzoic acid has a strong, pungent, aromatic odour, but is very seldom used as a medicine. It is used in some articles of perfumery.

BERIBERI. A species of palsy observed in the East Indies, in which the patients seem to imitate sheep in lifting their legs when they walk. Hence the name, from an Indian word signifying a sheep. The disease sometimes seizes suddenly, but generally comes on gradually. The symptoms are, a universal lassitude, a wrong motion of the hands and feet, with a tingling sensation in those parts, such as is felt in the toes and fingers in cold weather. The disease sometimes affects the muscles of the chest, and alters the breathing and the voice. It is cured by moderate exercise and frictions, and by bathing the lower extremities in warm water, in which some aromatic plant has been boiled. The affected parts are rubbed with a mixture of the oil of mace and roses. Decoctions of guaiacum and sarsaparilla are of service taken internally, and a mild laxative is to be occasionally given.

BETONY, *Betonica officinalis.* A plant formerly used in medicine, and much celebrated for numerous virtues; its roots are said to vomit and purge violently, and appear in some respects to resemble hellebore; but betony is now totally neglected. "Antonius Musa, physician to the Emperor Augustus, filled a whole volume with enumerating its virtues, stating it as a remedy for no less than forty-seven disorders; and hence in Italy the proverbial compliment, *You have more virtues than betony.*" (HOOPER'S *Medical Dictionary.*)

BEZOAR STONES. Concretions found in the stomach and intestines of some of the lower animals, which once had great celebrity for their power of preventing and curing disease, but which, in this country at least, are now justly considered as of no value. Those formerly used were chiefly of a resinous nature. A pretended bezoar stone made of a mixture of vinegar with absorbent earth, was sold under the name of Gascoigne's powder, and thought useful in the diseases of children; but even this composition, worthless as it would be, if the real bezoar were employed, is said to be made of tobacco and pipe-clay, tinged with ox-gall.

BILE. A fluid of great importance in the animal economy, known in popular language by the name of *gall.* It is secreted or formed from the blood, by that large and important organ the liver; and it differs from other secretions in being formed not from arterial but from venous blood. The blood which supplies the stomach and the greater portion of the intestinal canal, flows from the different organs to which it is distributed, into several veins; which, instead of conveying the blood to the lungs to be again

fitted for circulating through the body, are branched out like an artery, and carry the venous blood through the liver, to be employed by that organ in forming the bile. The bile is carried by a canal into the intestines, a few inches below the lower orifice of the stomach; and this canal is made up by the junction of two others, one of which comes from the liver itself, and the other from the gall bladder, in which part of the bile is lodged for some time, and becomes a little thicker than that which goes at once to the intestines.

The bile is a liquid of a yellowish green colour, a greasy feel, a bitter taste, and peculiar smell. It is an essential requisite to healthy digestion, and to the formation of the milky fluid named chyle, into which the food is changed shortly after passing out of the stomach into the next portion of the intestines. Bile is necessary also to promote the proper action of the intestines, and to cause them to evacuate their contents sooner than they would otherwise do; for when the bile is deficient in quantity, the body is generally costive.

Influence of the BILE *in producing diseases.* The bile being a fluid of such importance, and secreted by an organ of such magnitude as the liver, has attracted much attention both from physicians and the people; and many diseases are justly ascribed to the irregularity of its production and distribution, though it is blamed much oftener than it deserves. Nothing is more common than to hear patients ascribe to bile many disorders of the stomach and bowels; and from the descriptions of some, they seem to consider the bile as accumulating in their stomachs, as if in a bag or abscess, on the breaking of which they obtain a discharge of bile, with great relief. In the healthy state, there is no bile whatever in the stomach; the canal which carries the bile into the intestines being situated several inches below the orifice of that organ; and it is only when the downward motion of the bowels is by some cause inverted, that the bile is forced upward into the stomach, and discharged by the mouth. One very common cause of this inverted motion of the commencing portions of the intestines is vomiting, either from the action of emetic medicines, or when it takes place as a symptom of disease. In many febrile maladies, especially in those of warm climates, there is a great discharge of bile by vomiting; and the bile is believed to be the cause of the disease. Hence the frequent mention of bilious fevers of all descriptions, and the anxiety of patients, and of some physicians, to get rid of the bile, and so to cure the patient. The reason of the bile showing itself so copiously in these diseases, is, that in warm climates, and in warm weather, there is really a great deal more bile formed than in ordinary circumstances, and it is also somewhat altered in its qualities; but in a person in health, the worst that is likely to happen is a degree of purging, by which the offending fluid will be carried off. But as the poisonous effluvia giving rise to fever produce great derangement of many functions, first the stomach suffers, and throws up its contents; and the motion of part at least of the intestinal canal being inverted, bile is brought up in abundance, and vitiated in its qualities, by which the stomach is still more irritated, and the mischief is protracted for a long time, perhaps till death ensues. It is not wonderful, therefore, that the large quantities of bile discharged, the perpetual distressing vomiting, and the other urgent symptoms, should be considered as arising from the presence of a fluid so copious and so striking in its properties, and so apparently adequate to produce the greater number of the phenomena of the fevers of warm climates.

Heat increases the secretion of BILE. Similar effects sometimes take place in more temperate climates, when the summer has been warm; at the end of such warm seasons, or in autumn, a great discharge of bile both upwards and downwards occurs, producing the disease called

cholera morbus. It is admitted that long continued heat has an influence on the secretion of the bile, both as to quantity and quality, and whether it gets into the stomach or not, something must be done to discharge it. It is believed that mercurial medicines have some peculiar power of acting on the outlet of the canal which conveys the bile to the intestines; and that by their action on this canal they encourage the liver to throw out the bile in large quantities, and so to prevent any diseased accumulation. When there is considerable headach, sickness, oppression at the stomach, bad taste in the mouth, and hot hands, from three to five grains of calomel in form of a pill often produce singularly good effects; this may be taken for two or three successive days, taking care afterwards to use a saline purge, or one of senna, to prevent any portion of the calomel from remaining in the bowels, as that might salivate. The sallow complexion, so common in those who reside in warm climates, and in those who have suffered from agues in more temperate ones, appears to arise from some affection of the biliary system; and though we can hardly expect to get rid of this unhealthy state altogether, it may be still proper to regulate the bile by prudently directed courses of calomel. When there is an overflow of bile, either actually inducing bilious vomiting and purging, or threatening it, the best practice is largely to dilute its acrimony by copious drinking of mild fluids, as barley-water, thin gruel, weak tea, or toast-water. The abuse of spirituous liquors is a fertile source of derangement of the biliary system; this we explain by referring to the sympathy which exists between the brain and the liver; and by the same sympathy we explain the irregular secretion of bile from strong emotions of the mind.

Bile *is increased by certain Diet.* Certain modes of living and articles of diet are believed to have an influence on the biliary system, and should be carefully avoided in cases where the stomach and bowels are prone to get out of order, and where there is much tendency to corpulency; such are butter, pastry, malt liquors, and especially ale.

Consequences of the Bile *being deficient, or not getting into the Intestines.* Sometimes the liver is abundantly able to secrete bile, but, from various causes, it does not get into the intestines. In this case, the absorbents carry it into the mass of blood, so that, being mixed with it in every part of the body, it shines through the vessels and the skin, and gives the whole body a yellow tinge, very conspicuous in the white of the eyes. This disease is called jaundice; for the causes and cure of which, *see* Jaundice. When the bowels are torpid for want of the due quantity of bile, they may be gently stimulated by calomel, in the dose of one grain, or two grains night and morning; or one of the blue pills night and morning.

Among the ancients it was believed that the state of the fluids gave rise to many diseases; and particularly the bile was supposed to become corrupted and *black*, and so to be the cause of various diseases. Physicians are now quite persuaded there is no such thing as *black bile;* but in common language this theory remains, and the term *melancholy* is derived from two Greek words, which signify *black bile.*

BILIARY CALCULI, or Gall Stones. The bile in some cases is apt to concrete, and to form hard substances of various sizes. They sometimes form in the gall bladder, and sometimes they are found in the duct through which the bile passes into the intestines; and by obstructing the passages, they prevent the bile from getting into the proper place, and cause it to be dispersed through the whole body, giving rise to the disease called *jaundice.* When this is the case, the stools are white, from the absence of bile; until, either by mechanical means, or by the gradual dilatation of the canal, or by proper medicines, the obstruction is removed, and the passage being cleared, the bile

again gets into the intestines, when the disease is relieved, and the gall stones are found mixed with the excrement. Sometimes great numbers are found in the gall bladder, not large enough to make any obstruction. They are found by chemical examination to be composed of different ingredients; some are like spermaceti; some have the addition of a little altered bile. The gall stones of oxen are yellow, and sometimes used by painters, though their colour is not permanent, but soon changes to a brown.

BILIOUS. This word, when correctly applied, signifies, containing or conveying bile; but it is used in a variety of meanings by patients when giving an account of their ailments. Those who are affected with stomach complaints, and who, by vomiting, bring up some portion of bile into their stomach, have some reason for the language they employ when they say they are *very bilious*. But multitudes use the same phrase who never see or taste that fluid; and all we are to understand by the popular use of the term is, that the patient has symptoms of indigestion and stomach complaints. When pastry or butter, or ale and other malt liquors, are said to be *bilious*, the physician will admit this, when he recollects the tendency of such articles to injure the digestive progress, and the various organs destined for it; among which the liver acts a very conspicuous part.

BILIOUS FEVERS signify the remittent fevers of warm climates, or of warm seasons; in the progress of which fevers much bile is discharged upwards and downwards, as explained under the article BILE.

BINDER. A bandage applied round the abdomen of women newly delivered, in order to give a proper degree of support and pressure to the muscles and internal organs. *See* DELIVERY.

BINDING. A term applied to such medicines or articles of diet as are believed to have the effect of rendering the bowels somewhat torpid. Thus opium is certainly binding; and rice diet is not unfrequently so. Though *binding* be the literal translation of *astringent*, it has not precisely the same meaning; as astringent more frequently means corrugating or contracting.

BISCUIT. Bread which is much or doubly baked, as its name imports; it is not fermented, and hence is not much disposed to become acid in the stomach. Biscuits are therefore useful in the diet of children, and of those who are liable to acidity in the stomach. Biscuits keep a long time; hence their utility as a part of sea provisions. Those made with butter have all the inconveniences of that article, and should not be used by those who are troubled with stomach complaints.

BISMUTH. A bright metal, of a foliated texture, and having a reddish yellow tint. Its oxide or subnitrate is sometimes used in spasmodic affections of the stomach, and to allay vomiting; the dose from three to five grains, taken in jelly or honey.

BITE OF A MAD DOG. *See* HYDROPHOBIA.

BITTERS. There are many vegetable substances possessed of a bitter taste, which are highly useful both in diet and medicine. They produce a powerful effect on the digestive organs, and through them on other parts of the system. Bitters seem to be absolutely necessary to promote digestion in animals who live on herbs, as cattle do not thrive upon grasses which do not contain a portion of bitter principle. In man, slight bitters produce invigorating effects on the stomach; and their presence in malt liquors not only renders such liquors less injurious to the system, but also, when taken in moderation, assistant to digestion. Bitters stimulate the stomach, correct unwholesome food, and increase the nourishing powers of vegetables.

The purest bitters, and those which are most used as medicines, are chamomile flowers, gentian, quassia, and colombo. *Chamomile flowers* are used in the form of infusion, made by pouring a quart of

boiling water on a handful of the dried flowers. Of this infusion, a tea-cupful may be drank twice a-day. There are different ways of using *Gentian*. The infusion of the root in hot water is one of the most agreeable bitters we can employ; and the flavour will be improved by infusing along with the gentian some orange peel or the rind of lemons; from one to two ounces may be taken twice a-day. The extract of gentian is used in the dose of from ten grains to thirty, made into pills. There is a wine of gentian made by macerating for twenty-four hours, in proof spirit, four ounces of the following ingredients: half an ounce of gentian root, an ounce of Peruvian bark, two drachms of dried orange peel, and an ounce of canella bark. After the maceration, two pints and a half of white wine are to be added; of this, one or two dessert-spoonfuls may be taken twice a-day. The tincture of gentian is also very much employed. The principal objection to using bitters in the form of wine or tincture, is the resemblance which such practices bear to dram-drinking, and the danger of inducing that habit. *Quassia* is an excellent bitter, used in the form of infusion made by a drachm of the bark and wood of the plant to a pint of water: a cupful may be drank several times a-day. *Colombo* may be used in powder or in tincture; ten grains of the former, and a tea-spoonful in a glass of water, of the latter.

BITTER-SWEET, Woody Nightshade, *Solanum Dulcamara*. A shrub, the twigs of which were formerly used in medicine, and much esteemed for their power in the cure of cutaneous affections, such as are commonly, though improperly, termed scurvy spots; in rheumatic affections, scrofula, and ill-conditioned ulcers. Bitter-sweet has principally been used in decoction as a diet drink, in the dose of two or three ounces three times a-day, gradually augmenting the quantity, till a pint be taken daily. The strength of the decoction is an ounce of the twigs to a quart of boiling water. A stronger decoction may be used externally as a lotion in the above-mentioned complaints.

BITUMENS. Fossile bodies, which have a certain resemblance to oily and resinous substances. They may be divided into two classes, bituminous oils, and bitumens properly so called. The bituminous oils are petroleum, and maltha or sea wax. Petroleum is used, in those countries where it abounds, viz. on the shores of the Caspian sea and in Persia, as an oil for lamps. When petroleum is distilled at a low heat, the liquid which comes first over is distinguished by the name of *naphtha*. It is colourless, perfectly fluid, very volatile, and has a peculiar smell. Naphtha burns with a strong yellow flame, and a considerable smoke. Sea wax is a solid substance found on the Baikal lake in Siberia. It is white, melts when heated, and on cooling assumes the consistence of white cerate. The proper bitumens are asphaltum, mineral tar, and mineral caoutchouc or mineral Indian rubber. Bitumen, united in various proportions to charcoal, constitutes the numerous varieties of pit coal, so much employed in Britain as fuel.

BLACK DROP. *See* Laudanum.

BLADDER, Gall. A membranous bag situated at the under or concave side of the liver, into which a great quantity of bile is sent to be detained for some time, in order to be thickened, or to undergo some change not perfectly known. Concretions often form in the gall-bladder, and by getting into the canal, which is too narrow to allow them to pass, they cause the bile to be dispersed through the body and to produce jaundice. The gall bladder is sometimes much enlarged, and very often is found after death to contain a great number of biliary concretions. *See* Jaundice, *and* Biliary Calculi.

BLADDER of Urine. A large membranous bag situated at the lower part of the belly, into which the urine, after being secreted from the kidney, drops from two canals called ureters. These tubes enter the coats of the bladder in an

oblique direction, by which means they prevent the urine flowing back along their course. When the bladder is distended, we have the desire to evacuate the urine; and also when that fluid has much acrimony, although the quantity be not enough mechanically to distend it. When certain concretions are lodged in the urinary bladder, they give rise to most distressing symptoms. *See* STONE *and* URINE.

BLEEDING signifies either the spontaneous flow of blood from some part of the body, or the artificial taking away of blood by various means for the cure of diseases. In the first sense it will be treated under the article HÆMORRHAGE, and in the second under BLOOD-LETTING.

BLINDNESS may arise from whatever injures the transparency and perfection of the different parts of the eye, considered as an optical instrument; or it may depend on some fault in the brain or optic nerves, or the expansion of those nerves which is called the *retina*. When the transparency of the clear part in front of the eye is destroyed, blindness is the consequence. This opacity happens from very violent inflammation, and from that species of ophthalmia which is common to infants, in which a great quantity of purulent matter is discharged. Small-pox often destroys the structure of the eyeball. If there is a thickening of the capsule enclosing the crystalline lens, or a loss of the transparency of the lens itself, blindness follows. Pressure of tumours on the optic nerves, or insensibility of the retina, occasions blindness. In this case, there is no imperfection seen in the eyes, but the pupil does not diminish or enlarge its size according to the quantity of light, as happens when vision is perfect. This last affection is called *amaurosis* or *gutta serena*. *See* EYE AND ITS DISEASES.

BLISTERS are a useful remedy in various morbid affections, both internal and external; though the manner of their operation is not fully understood. Blisters, when applied to the skin, first produce a tingling heat, then a redness, and if they are continued long enough, they raise the outer skin in one or more vesicles, which contain a clear fluid separated from the mass of blood, and poured out by the exhalant vessels. The substances, most commonly used for blistering, are mustard, hartshorn, or savine; and most frequently of all, cantharides, or Spanish flies, the *Cantharis vesicatoria* of the Edinburgh Pharmacopœia, the *Lytta vesicatoria* of the London. These insects when dried, are powdered and mixed with some unctuous matter, and being spread upon leather, are applied to the surface of the body where we wish the blister to be raised. No substance produces the blistering effect with more certainty than cantharides.

When BLISTERS *are useful.* The cases in which blisters are usefully applied are the following. In nervous fever, where there is delirium, dimness of sight, deafness, and great debility, blisters may be applied to the neck or between the shoulders; but much care must be taken in the after-treatment, lest the blistered part should mortify, from the weakness of the vital powers. In apoplexy, after blood-letting, we may attempt, by blisters to the head and neighbourhood, to remove the insensibility; it is also useful in palsy, sometimes when applied to the part, sometimes at a distance. In inflammation of the lungs after sufficient bleeding, in various stages of consumption, in obstinate coughs, in asthma, rheumatism, indolent swellings of the joints, and many other cases, blisters are highly useful.

Cases in which BLISTERS *are improper.* Their use is hazardous in dropsical habits, in which they sometimes give rise to ulceration and gangrene, although they sometimes occasion the flow of a great deal of watery fluid. In constitutions which are very irritable, it may be prudent to abstain from them; and also in cases where there is any tendency to gravel, or to any disease of the urinary organs. Some constitutions are so irritable as to render the use of blisters inadmissible.

Mode of applying BLISTERS. They should be fixed in their situation by slips of adhesive plaster at their corners, and the fluid should be let out of the vesicle by a cut with sharp pointed scissors, taking care not to remove the outer skin along with the dressings, as it is the kindliest application we can get to the tender surface below.

The time during which a blister should remain on, is, in general, about twelve hours.

Mode of counteracting the occasional bad effects of BLISTERS. The use of blisters, like that of blood-letting, is sometimes directed by those who are little aware of its importance; and sometimes symptoms follow their use, which are prejudicial instead of salutary. One of their most troublesome effects is to produce a degree of strangury, or even bloody urine; to prevent, or to cure this, the patient should drink plentifully of mild diluent liquors, as gruel or barley-water, and to each English pint a drachm of saltpetre may be added, to increase the effect of dilution on the urinary organs. In some constitutions, and in certain inflammatory diseases, blisters excite irritation, restlessness and increase of fever, or they give rise to inflammation of the spreading erysipelatous kind; sometimes they are difficult to heal, and produce extensive ulcerations, or even gangrene.

The healing of an ulcerated surface from a blister is sometimes very difficult to accomplish. We are obliged frequently to change our applications, and even to use basilicon ointment, or dressings of still greater harshness. Then we are compelled to return again to poultices and simple dressings, and it is only after many days suffering, that the sore appears disposed to heal. The constitutional symptoms in such cases must be attended to.

Other modes of BLISTERING *besides Cantharides.* Sometimes we wish to produce an irritation on the skin of a less degree of severity than that produced by cantharides. This may be done by harts-horn, more or less diluted, by mustard applied till a proper degree of redness and irritation is produced, which commonly takes place in about twenty minutes or half an hour. Such stimuli, as well as the common blister, are sometimes applied to the feet when the powers of life seem languid. Tartar emetic, made into an ointment in the proportion of one or two drachms to the ounce, forms a very powerful stimulant to the skin, and occasions a pustular eruption, which proves very serviceable in deep-seated inflammation. The pustules produced by the ointment are very painful. They have some resemblance to those of small-pox, but they are in general much smaller, not so red at the base, and not so tense and white when fully suppurated. Frictions with this ointment have been recommended in hooping-cough, and other disorders of the chest. The eruption should be kept up for some time, either by applying some more of the ointment diluted, or some other stimulating ointment. When the pustules are very much irritated and painful, a bread and milk poultice will give relief.

BLOOD. A red fluid, of a saltish taste, and urinous smell, which circulates in the heart, arteries, and veins. The blood is a most important fluid in the animal body. It furnishes the materials from which the various parts of the body are furnished with nourishment. It is the fluid from which the secretions are formed, it is the source of animal heat, it stimulates the heart to contraction, and by its presence in the blood-vessels it distends them, and gives plumpness to the body; and by shining through the transparent skin, causes the fine complexion, and the shades of colour, which impart so much beauty and interest to the healthy human countenance.

"Many calculations have been formed of the total quantity of blood in the body; but as the data upon which they have proceeded are extremely uncertain, so the conclusions have been widely different; and, of course, the greatest part of them

remote from the truth. Perhaps, upon the whole, the estimate, which would seem the nearest approximation, is that of Haller, who supposes that the blood may constitute about one-fifth of the weight of the adult body, the proportion of the fluids being greater in youth, and diminishing as age advances. A body weighing one hundred and fifty pounds, would, therefore, contain about thirty pounds of blood, and of this, it is supposed, that three-fourths or more are in the veins, and one-fourth only in the arteries." (BOSTOCK's *Physiology*.)

The blood in one portion of the heart is of a bright, florid red colour, and is driven by the contraction of this powerful organ into the arteries, large tubes which divide and subdivide into tubes of extreme smallness, and by which the blood is distributed into all parts of the body, for the purposes of growth, assimilation, and secretion. When the red blood has reached the extremities of the arteries, it is conveyed into veins, which in their distribution resemble reversed arteries, the small tubes continually going to form larger ones, till by two large trunks, the blood is brought back to the heart. The blood in the veins differs in colour from that in the arteries; it is now dark-coloured, and incapable of furnishing materials for nourishment or secretion, with the remarkable exception of the venous blood from the intestines, which, circulating through the liver, is employed in the secretion of bile. The blood which has circulated through the body and been employed in secretion, is unfit for performing a second time the same functions; and in order to repair its salutary powers, and be again rendered fit for the purposes of the animal economy, it passes through the lungs; in which organs, by the action of the air, it loses its dark venous colour and injurious properties, and again is fitted, in the state of florid arterial blood, to impart life and vigour to the animal system.

Blood, when it is first drawn from the body, appears a uniform fluid; but by being allowed to rest, it spontaneously separates into two parts, viz. the *crassamentum*, or cake, and the *serum*, or watery part, besides a vapour which exhales when the blood is warm at its first drawing off. The crassamentum is thick, and like jelly; it soon becomes putrid; it is insoluble in water. The surface of the crassamentum exposed to the air is of a more florid red colour than that which is deeper in the dish, and not exposed to the air. The red globules may be washed away, and they leave what is called the fibrine of the blood. The other part of the blood is the serum, a lymphatic or watery fluid, with little smell, saltish to the taste, of a yellowish green colour. When blood is drawn from the body while under the influence of inflammatory disease, the crassamentum is covered with a tough leather-looking surface, of various depths, from the thickness of a shilling to a quarter of an inch, known by the name of the *buffy coat*. The appearance of this buffy coat, in conjunction with other circumstances, gives a very good indication of the inflammatory state of the system. Sometimes this appears cupped in the middle, drawing the upper part of the crassamentum from the sides towards the centre. The blood frequently puts on a similar crust in the state of pregnancy.

BLOOD-LETTING, *Sanguinis missio*, signifies the taking away of blood by artificial means, and is either general or local. General blood-letting is performed by the opening of veins or arteries by the lancet; and local blood-letting by the application of leeches or cupping-glasses. The great power of blood-letting in the cure of diseases cannot be quite satisfactorily explained. Even in pretty large bleedings, the quantity taken away does not bear a great proportion to the whole of the circulating mass; and blood-letting seems to do good principally by somehow altering that excited state of the system which occurs in robust constitutions, and which is marked by a full, strong pulse, and a florid look, with firmness and activity of the

muscular system. This excited state, pushed a little farther, passes into inflammation, general or local. When the fulness of the vessels is taken off by blood-letting, their coats contract less strongly, and the excited action is lowered. Blood-letting seems to have great effect by its action on the nervous system, as we see in the fainting which is brought on in many cases by a very small bleeding.

The taking away of blood, in whatever way it acts, is ascertained by long and universal experience to be one of our most powerful remedies. The particular case to which blood-letting is applicable may be considered as ranking under the heads of diseases of excitement, of fulness, and those which arise from tension or irritation. Blood-letting is useful in the following diseases. 1. *Fever.* As there are fevers of various kinds, and as the same disease in its different stages presents very various symptoms, the remedies which would be useful at one period, and in one kind of fever, would be destructive when the circumstances are altered. To no remedy is this remark more applicable than to blood-letting. At one time, it may be the means of a perfect cure; at others, it may occasion a waste of the vital powers which cannot be repaired. It therefore requires much discrimination to dete mine the kinds of fever, and the periods of the disease, and to guard lest bad consequences follow the loss of blood. 2. *Intermittent Fever.* Under the article AGUE, we have stated the symptoms of that disease which we consider as requiring blood-letting. 3. In *inflammatory fever*, where there is strong, quick, and full pulse, much flushing of the face, throbbing at the temples, delirium, thirst, and heat of skin, we should not hesitate to bleed largely; but it is greatly doubted by the most judicious practitioners whether such a pure unmixed fever is ever seen; a fever where there is the above assemblage of symptoms, unattended by local inflammation. 4. There is a disease now well known to the people by the name of *typhus fever*, where the pulse is small, weak, and fluttering, the tongue black, the skin dry, the patient delirious and insensible; in this fever, or to speak more correctly, at this *stage of the fever*, it would be insanity to bleed. But whatever may be the danger of bleeding at that stage of the disease, or however the physicians of forty years ago would have shuddered at the thought of bleeding a patient in *typhus*, it is well known that this disease often begins with symptoms of high excitement; and there is reason to believe that the blood is irregularly distributed and accumulated in certain organs. At this early period, blood-letting is one of the most effectual remedies we can employ; and when prudently and moderately employed, it prevents the sinking of that strength which frequently succeeds to high excitement when too long continued. Much caution is requisite not to bleed too often, nor when the disease has continued for several days; as this would have a tendency to bring on a dangerous and fatal sinking of the strength, or the true typhoid state. 5. *Inflammation.* Against inflammation of every organ, blood-letting is the chief, and almost infallible remedy. Other auxiliaries have been found, but our main reliance is upon blood-letting. There are some kinds of inflammation where it would not be so safe as in others; as in those which are of the nature of the rose or erysipelas, where much evacuation and lowering of the system is apt to be followed by great weakness and depression. 6. In *acute rheumatism*, or what is popularly called a rheumatic fever, it is generally proper to begin our treatment by a pretty free discharge of blood; and it is vain to expect success from the sweating practice, unless the high action of the vascular system be first reduced by this or other means. 7. *Active Hæmorrhages.* There are certain states of the system in which, after a period of what is called high health, feverish symptoms come on; and then a discharge of blood, generally clear and florid, spontaneously takes place from

some part of the body. Thus we have bleeding at the nose, spitting of blood, or a discharge of blood by stool, or urine. Such discharges of blood are called *active hæmorrhages;* and, however paradoxical it may appear to cure a discharge of blood by taking away more, yet by this operation the physician has it in his power to relieve the system, and to diminish the danger which might occur in organs liable to be injured by the too great activity of the circulation, or likely to become the seat of diseases which may ultimately prove fatal. Instances of active hæmorrhage are seen in bleeding from the nose, and from the lungs. There are bleedings again where the system is in a state quite the reverse of activity and excitement, and where artificial blood-letting would assuredly be improper. These hæmorrhages are termed *passive.* Such are the true sea-scurvy, and the too copious flow of the monthly discharge, when accompanied by weakness and a broken state of health: 8. In *apoplexy,* blood-letting is absolutely necessary. 9. In some *convulsive diseases,* especially if there is an appearance of any tendency to the head. 10. In certain kinds of *dropsy,* occasionally in *asthma;* and, in short, in any disease, by whatever name it may be called, where there is a necessity for quickly reducing feverish action, or diminishing the quantity of blood circulating in the system.

Quantity of BLOOD *to be taken.* With respect to the quantity of blood to be taken away, no general rule can be given; different diseases are to be treated with different quantities, and in two persons labouring under what might appear to be the same disease, a quantity that would have little effect in the one case would cure the other. In an adult of good strength, a pound of blood, or sixteen ounces, is a moderate bleeding; twenty-four ounces, a full bleeding; and from thirty-two to forty ounces, a large one. Some inflammations are so violent, and demand such active treatment, that in one day the bleeding may require to be repeated from three to six times, the quantity taken away in a day varying from sixty to eighty or ninety ounces, and at one bleeding from thirty to fifty ounces. In general, we are not to be regulated by measurement, but by the effect produced on the disease, and on the general system.

Mode of BLEEDING. The veins from which blood is most commonly taken, are those at the bend of the arm; there the veins are in general pretty numerous and easily got at, and a ligature is easily put round the limb to fill the veins. In diseases of the head, we consider it advisable to take blood from the external jugular vein, or from the temporal artery. In some cases, we find it difficult to get enough of blood from the arms, and we try it from the superficial vein of the foot. In bleeding at the bend of the arm, when the blood appears to run less freely, its flow is increased by the patient squeezing the hand, or grasping something in it, by which the blood is forced from the deep to the superficial veins. Sometimes we are prevented from getting the proper quantity by the patient fainting; in this case we are to lower the head and shoulders, to stop the orifice for a little, and then to let the blood flow when the patient is in the horizontal posture. Sometimes the patient, from mental emotion, faints almost immediately on the arm being tied up; and sometimes we must for the present be content with the diminished action of the system, of which this fainting is the proof. Sometimes the veins are so small, or so imbedded in fat, that it is impossible to get the quantity of blood we wish. This is often the case in children. We are obliged, therefore, to resort to other methods, as opening the temporal artery, or leeches, or cupping.

Accidents that sometimes follow BLOOD-LETTING. A dark livid swelling sometimes takes place at the wound made in blood-letting. It looks alarming to those who are not familiar with it; but it is not in general a circumstance of much

consequence, as it arises merely from the blood getting under the cellular substance and skin. It sometimes swells so fast that the proper quantity of blood cannot be obtained. In this case, we must take off the bandage, and apply compresses wet with a cooling lotion, as of vinegar, or spirits and water, to the swelling, retaining them by a slack bandage. The effused blood will in time disappear; and if we have not got enough of blood, it must be taken from the other arm. Sometimes there is inflammation of the skin in the neighbourhood of the wound. This is to be treated with cooling applications, and rest; and by a poultice, if there is a tendency to suppuration. Red lines are sometimes seen extending from the wound; these are inflamed absorbents, and are painful on pressure; sometimes the inflammation reaches to the arm-pit, causing the swelling of a gland there, and perhaps suppuration. Inflammation may spread along the course of the vein, and produce symptoms of the most alarming and even fatal nature. (*See* VEINS, *Inflammation of.*) The fascia, or membranous expansion on the forearm, may become inflamed, and give rise to great pain, tension, and febrile symptoms. Poultices are to be applied, and an extensive incision made through the fascia, to relieve the tension, and to give vent to matter. A nerve may be wounded, and this may give rise to convulsions, violent pain, and other symptoms of nervous irritation. In every puncture of the skin a nerve of some size or other must be wounded; and it is thought to be in consequence of the partial wound of a nerve of some considerable size that these violent accidents occur after blood-letting. The artery of the arm may be wounded, giving rise either to a dangerous bleeding, or to aneurism.

After enumerating so many accidents that may arise from blood-letting, we may surely be allowed to blame the rashness of those numerous dabblers in surgery, who pretend to be competent to the performance of this operation. Farriers, gardeners, midwives, and others, not only presume to say when bleeding would be proper, but also operate themselves; ignorant of the precautions they ought to observe, and aghast when the painful or dangerous consequences follow. It should be remembered, that as bleeding is one of the most salutary remedies, when timely and properly applied, so it is one of the most deadly and destructive when exhibited in wrong circumstances; and though, from its frequency, it must be often performed by those whose skill and experience is but small, yet it may be attended with accidents which require the utmost boldness, address, and promptitude, to counteract their fatal tendency.

BLOOD-LETTING *should not be employed but for the cure of disease, or for the prevention of it when manifestly impending.* Many persons who have no particular illness, apply to a surgeon to have blood drawn from them. On the Continent, and among country people, blood-letting is habitually employed at certain seasons, with the view of preserving their health; but it is a practice that should not be followed, as it is apt to induce a dangerous habit; and instead of diminishing the quantity of blood, it ultimately rather increases it. Fulness of the system may be prevented by safer means, such as purging; but even this preventive would be wisely superseded by temperance in eating and drinking, and avoiding the provocatives of modern luxury. When apoplexy appears to be likely to make an attack, as indicated by the throbbing of the temples, ringing in the ears, flushing of the face, and headach, then a precautionary bleeding will be very proper. Also when feverish symptoms occur in those who are known to be subject to spitting of blood.

BLUE PILL. *See* MERCURY.

BOHEA. A species of tea, brought, like all the rest, from China. It is of an inferior quality, yet great quantities of it are used in Britain. In its effects, it agrees with the other kinds of tea. When drank in moderate quantity, it invigo-

rates the system, and imparts a temporary exhilaration; but if taken too copiously, and too frequently, and if idle and luxurious habits are indulged in, it will aggravate hypochondriacal and hysterical complaints, and be accompanied with many of those diseases of the stomach and bowels known by the name of dyspepsia, indigestion, or stomach complaints, and which the common people class under the name of *nervous*. There are different kinds of Bohea, viz. Souchong, Cambo, Pekoe, Congo, and Common Bohea. *See* TEA.

BOIL. A circumscribed inflammation in the external parts, which terminates in a pointed swelling, sometimes as large as a pigeon's egg, attended with redness and pain, and sometimes with a violent burning heat. These inflammations generally suppurate, but they do so very slowly. They break at first on the upper part, and some drops of matter ooze out. What is commonly called the *core* is next seen; it is a purulent substance, but thick and tenacious, almost like a solid body, and may be drawn out of the abscess. Its discharge is followed by a flow of thinner matter, after which the pain ceases, and the part heals. If at any time the sore appears to be stationary, a little stimulating dressing, as basilicon, or vulnerary balsam, may be applied. Boils should always be brought to suppuration, for if we attempt to repel them in one place, they will appear in another. Fomentations and poultices are to be applied, sometimes with an onion to increase their stimulating properties, or with hemlock or opium to allay the pain if it be very violent. A saline purgative may be given. Sometimes young persons in full health and vigour are for a considerable time troubled with a succession of boils. Such should avoid butter and much animal food; they should use a due proportion of vegetable diet, and take a mild saline purgative pretty frequently, once in four or five days.

BOLE. A dry friable earth, sometimes mixed with honey, and used as an application to the sore mouths of children. It is chiefly of the argillaceous, or clay kind; and is an ingredient in some tooth powders, with the addition of some aromatic substance.

BOLUS. A medicine made up into the form of a little ball, larger than a pill, but soft enough to be easily swallowed.

BONES. The hard and solid parts of an animal body, which determine its shape, contain or defend the various internal organs, and give attachment to muscles. Bones vary in their texture, their shape, and various other particulars. They are either compact, spungy, or reticular; they are long and cylindrical, or broad and flattened. When all the bones of the body are dried, and artificially joined together, so as to show in a great measure the various motions which take place in the living body, the assemblage is called an artificial skeleton; and when the whole is kept together by the drying of its ligaments, it is called a natural skeleton. The number of bones in the human body is about 245 or 250; reckoning some small bones, which are sometimes present and sometimes not; these are situated where very frequent motion occurs, as about the thumb and great toe. Bones are composed principally of phosphate of lime. Besides dislocations and fractures, they are subject to caries or rottenness, to necrosis, in which a bone dies, and is replaced by a new one; to rickets, to distortion and softening of their substance.

BONES, CARIES OF. The rottenness or partial mortification of a bone, being to bone what a foul ulcer is to soft parts. This happens, when the bone is deprived of its investing membrane called the periosteum. The bone then becomes yellow, brown, and at last black. As the disease advances, the bone is corroded, and discharges an acrid matter, which consumes the neighbouring soft parts.

Causes. There are various diseases of which caries of the bones forms a symptom, as syphilis, scrofula, scurvy; and it

may be the consequence of abscesses, wounds, or contusions.

Cure. Its cure is to be attempted by whatever is proper to be done for the original disease, or exciting cause; and local applications are to be used to promote what is called the exfoliation or scaling off of the diseased bone. The actual cautery, preparations of mercury, spirits of wine, or other stimulating applications are sometimes necessary.

BONES, Death of, *Necrosis.* A very singular disease of the bones, in which a bone, or part of a bone dies, and is replaced by a new one. Unless the fact had frequently occurred, we should never have expected that a bone so large as the thigh bone or the shoulder blade should die, and be replaced by a new growth, and the old one be taken away by absorption, without the feeling or motion of the limb being impaired. The following are the symptoms of necrosis. At its commencement, a deep seated acute pain is felt, which is soon followed by a rapid enlargement of the parts along the course of the bone. An inflammation, and one or more abscesses take place, which do not heal, but become fistulous sores. The openings are generally situated over the most superficial part of the bone. These abscesses are situated within the newly formed bony shell, and a probe can seldom be introduced into them, so as to discover any loose pieces of bone; but sometimes small pieces make their way out through the abscesses. Sometimes the abscesses heal up, and the old bone being absorbed, is never seen, but only a permanent thickening of the part remains. This is the most favourable way for the case to terminate; but at other times, the old bone makes its way through the new bone, and through the skin, with different degrees of inflammation, pain, and suppuration. The old part, called the *sequestrum*, may be moved by shaking it; and in some favourable situations may be easily pulled away; in others, it may be necessary to make an opening to discharge it. The period of life most subject to this disease, is from twelve to eighteen years of age. The bones most liable to necrosis are those of the extremities, the clavicle, the scapula, and the lower jaw. In general, there is no external apparent cause for the disease; but sometimes blows, acrid substances applied to the teeth, and the effects of mercury, give occasion to necrosis of the lower jaw.

BONES, Softening of, *Mollities Ossium.* A general softening of the bones; the consequence of an unhealthy state of the system brought on by a poor diet, cold damp lodging, and sedentary employment, as at manufactories and similar works. One of the most distressing consequences of this softening of the bones, is the distortion of the female pelvis, which sometimes takes place, rendering delivery impracticable. When softening of the bones is discovered in time, the persons must use a nourishing diet, with bark and wine; they must continue in as easy a posture as possible, till the bones get a little hardness and consistency, and then gradually take such exercise as they can bear. *See* Dislocations, Fractures, Rickets.

BONES, Decoction of. By long boiling in a very strong Papin's digester, by which a heat much superior to boiling water can be applied, bones part with a great deal of gelatine, which makes a very nutritious diet.

BORAGE, *Borago officinalis.* The name of a plant, having a beautiful blue flower; the leaves are supposed in some countries to be refrigerant and cordial. The principal use of the leaves in England is in the composition of a summer drink, called a cool tankard.

BORAX. A salt composed of boracic acid, soda, and water of crystallization. It is found in Thibet in an impure state and is purified by gentle calcination, solution, and crystallization. Its principal use in medicine is in the formation of gargles, and to mix with honey to be applied to the sore mouths of children; equal parts of borax and clarified honey, with the addition of a little tincture of

myrrh, is a good application to the thrush. A good gargle for the mouth and throat, when under profuse salivation, is made by taking two drachms of borax, dissolving it in eight ounces of rose water, and adding a little honey and tincture of myrrh. Modern chemistry has derived some curious facts from the decomposition of the boracic acid. A particular substance of an inflammable nature, called *boron*, has been extracted from it. Boron is a brown insoluble powder, and burns with much brilliancy when heated to 600.°

BOTANY is the science of plants. It comprehends the classification and nomenclature of plants, an account of their uses in medicine, in diet, and the various arts; their physiology, and their diseases. It abounds in objects the most beautiful and interesting; from its being pursued out of doors, and frequently in romantic rural scenes, the pursuit of it ought to be recommended to the sedentary and hypochondriacal, as well as to the cultivator of natural science, and those who desire to advance the knowledge of pharmacy and medicine.

BOUGIE. The name given by surgeons to a long slender instrument, made of elastic gum, or of linen coated with wax, which is introduced through the urethra into the bladder, or which is applied to strictures in the urethra, to endeavour to clear that passage. The introduction of bougies requires a considerable degree of address and caution. They should not be kept so long in the urethra at one time as to excite pain and irritation. Their use is to be persevered in for a considerable time, introducing them every day, till the stricture is overcome; and they should be carried the length of the bladder, to be sure that we have accomplished our purpose. Sometimes bougies are armed with a little bit of caustic, in order to destroy the stricture. The case in which this plan answers best, is where there are one or more strictures, narrow, like a thread tied round the canal, so as to lessen its diameter for a very short space.

BOWELS, Inflammation of, *Enteritis*, is characterized by the symptoms of general fever, heat of skin, thirst, restlessness, quick and hard small pulse; and by sharp pain in the belly, increased on pressure, and accompanied by vomiting and costiveness.

Causes. Inflammation of the bowels is occasioned by acrid and irritating substances swallowed by the mouth, by hardened fæces, by vitiated bile, by long continued costiveness, and by constriction of some part of the canal in cases of rupture: a very frequent cause of it is cold, especially when applied with damp to the feet.

Diagnosis. Inflammation of the bowels is distinguished from colic by the absence of fever in this last, and by the pain in colic not being increased on pressure; and, in every case of severe pain of the bowels, with vomiting and costiveness, the practitioner should make very strict inquiries, lest a rupture should be the cause of them. This is more especially necessary in the iliac passion, or similar violent bowel complaints of females, who, from delicacy, or not knowing the importance of the circumstance, are not likely to inform their attendant, of the existence of a tumour in the groin. Inflammation of the bowels is distinguished from that of their investing membrane, or what is called peritoneal inflammation, by this last not being attended with costiveness.

Prognosis. The disease proceeds with great rapidity, and is attended with great danger. It may soon end in mortification; in which event, the patient experiences a fallacious remission of the pain and other distressing symptoms; but the sinking and irregularity of the pulse, the shrinking of the features, the cold sweats, hiccup, and distension of the belly, too plainly indicate approaching dissolution. On the other hand, if the pain gradually abates, if natural stools are passed, if either perspiration, or a copious flow of urine occurs, with a firm equal pulse, we may hope for a more favourable termination.

Treatment. The most prompt and active measures must be put in practice; the first and most important of which is blood-letting; and we must not be deterred by the small pulse at the beginning of the disease, as a copious bleeding will not make it smaller, but rather improve it. The bleeding will probably require to be repeated three or four times; and we must proportion the quantity taken to the effect produced, and not count by ounces or cupfuls. Besides general bleeding, much benefit may be derived from the application of a very considerable number of leeches to the abdomen, not less than fifty or sixty; and after the wounds have bled as much as they will, we may apply a large poultice to promote the flow still more. Warm fomentations to the belly may tend to promote the relaxation of the spasm which is sometimes present; and a large clyster of warm gruel may be conjoined, to act as an internal fomentation. A blister over the whole belly is of great service. Meantime, we are to give laxative medicines by the mouth, as soon as we have allayed the vomiting by the means above directed; it may be prudent to use at first those medicines which we may hope will evacuate the bowels without irritating them; viz. castor oil, or Rochelle salts, or the compound powder of jalap, or calomel and rhubarb. Sometimes an evacuation of the bowels may be produced by suddenly throwing cold water on the feet and legs. Very little aliment should be given; a little barley-water or thin gruel is quite sufficient; and when the disease is subdued, the diet should be of mild and easily digestible articles, as weak beef-tea, chicken broth, and the like, using old bread, and avoiding flatulent vegetables.

BOWELS, Obstruction of. *See* Constipation *or* Costiveness. *See also* Colic, *and* Rupture.

BRAIN. The highly important organ contained within the skull of the more perfect animals, and forming the medium of communication between mind and matter. The brain sends out many chords, called nerves, to the various parts of the body, and to the organs of the senses, and it is essential to the perfection of sense and motion, that the communication between the brain and the extremities of the nerves be free and uninterrupted. Thus, if the large nerve sent to any particular limb or muscle be cut through, the person is incapable of using that limb or muscle; and if the nerve going to be expanded at the back part of the eye, be cut through, the patient is deprived of the power of vision. Much labour and ingenuity have been expended on the dissection and description of the brain, every part of it has been named and minutely drawn and described, its various convolutions and membranes have been noted, and the admirable contrivance of its circulating system fully unfolded; and both from analogy, and from the contemplation of its wonderful mechanism, we must be assured that so complicated a structure cannot have been formed in vain; yet all the labours of the most expert anatomists have not succeeded in demonstrating what part of the brain is necessary to the healthy exercise of the various intellectual functions; and we are compelled to acknowledge that of the several parts of this important organ, to us so interesting, we hardly know more than the appearance and the names.

Whether the particular uses of the several structures found in the brain are to remain among the arcana of physiology, like the functions of the spleen; or whether a longer and a happier course of observation and experiment is to throw unexpected light on this important subject, we know not; but at present, those who have studied the brain and nervous system the most skilfully, are the most ready to confess that they know but little.

Anatomists have divided the brain into two hemispheres, each hemisphere into three lobes; these divisions are plainly and distinctly made by membranes, and by the form of the bones on which the

parts rest, or by which they are contained. The brain is covered on its outer surface by a very strong membrane, metaphorically called, from its firmness, and from its being supposed by the ancients to give origin to all the other membranes of the body, the *dura mater*. This membrane dips down between the two hemispheres of the brain; and investing its lower and back part, it forms a covering for another substance called the little brain, composed of exactly the same sort of substance as the large brain. These two organs, the brain and little brain, each terminate in two medullary ropes; and uniting at a sort of tubercle near the first vertebra of the neck, they pass down into the hollow formed by various bones of the back, and there constitute what is called the spinal marrow; agreeing precisely in its functions with the brain, and to be considered merely as a prolongation of it, lodged for convenience in the cavity of the vertebræ, and sending out nerves to various organs.

The principal disorders to which the brain is subject, are compression, concussion from external injury, inflammation, accumulation of fluid in its ventricles, apoplexy, and various growths, which give rise to apoplexy or convulsions.

BRAIN, Compression of, is the term used to denote that morbid state arising from any thing pressing on the brain, whether from an external or internal cause. When a person has received a violent blow on the head, or a fall or other accident, and in consequence has a part of the skull driven in upon the brain, he becomes affected with the following symptoms: There is general insensibility, the eyes are half open, the pupil is dilated and does not contract when a candle is brought near the eye, the limbs are relaxed, the breathing is loud and snoring, the pulse is strong, full, and slow; and not unfrequently vomiting occurs. When we see the bone driven in upon the brain, we consider the compressing cause as ascertained; but the same symptoms may occur when the bone is not injured, or when it is merely fractured, without any part being beaten in upon the brain. In this case, we believe the compression to arise from some fluid pressing upon the brain internally, either blood shed from its vessels, or clear lymph, or a mixture of both. Now, the violence may either cause a sudden discharge of fluid, in which case the symptoms will come on immediately; or the injury may be less, and the fluids may be poured out gradually, so that the compression will not take place till a certain quantity has accumulated. A person, therefore, who has received a violent blow on the head, is not to be considered as out of danger, because the bad symptoms do not immediately show themselves. The brain may be compressed independently of external violence, by diseases of the system; and by referring to the article Apoplexy, it will be seen that the same symptoms are set down as characterizing that disease. In all these cases, our indication is to relieve the brain from the compressing body, whether it be bone or fluid, externally or internally applied. The bone is to be raised from the brain by the application of adequate force, either manual or instrumental; a lever or elevator is to be put under the bone, and if there is no proper place for the lever to rest upon, the operation of the trepan must be resorted to, which consists in the removal of a piece of bone near the verge of the injured part, so as to obtain a fulcrum for the elevator. Sometimes the mere removal of the depressed bone will alleviate the symptoms; and if blood be effused immediately under the skull, it will be evacuated also; but if it be in the more internal parts of the brain, its discharge will be more difficult, and it requires the utmost exertion of the judgment of a skilful and experienced surgeon to decide on the propriety of further steps, and what those steps may be. When compression of the brain is removed, the practitioner is to direct his care to the prevention of inflammation, and other untoward symptoms. For the treatment of Apoplexy, see that article.

BRAIN, Concussion of. The name given to the injury supposed to be received by the brain from great violence inflicted on the head, when there is no organic injury discovered, neither fissure, fracture, nor extravasation, either in the living or dead body. The same symptoms occur when the head has not received any external injury, and when the shock has appeared to have been sustained by the whole frame. A person may fall from a height, light on his feet, and yet be affected with all the symptoms of concussion of the brain. These vary in degree, from the slight stunning which follows almost every violence done to the head, to the loss of all sense and motion, which is soon followed by death. Mr. Abernethy thinks that the symptoms of concussion may properly be divided into three stages; the *first* is that state of insensibility and derangement of the bodily powers which immediately succeeds the accident. The breathing is difficult, but in general without stertor or snoring; the pulse intermits, and the extremities are cold. This goes off gradually, and is succeeded by the *second* stage; in this, the pulse and breathing are better, and though not regular, are sufficient to maintain life, and to diffuse warmth over the extreme parts of the body. The patient is inattentive to slight external impressions, though he feels when the skin is pinched. As the effects of concussion diminish, he replies to questions put to him in a loud tone of voice, particularly if they refer to his own suffering; otherwise he answers incoherently, and as if his attention was occupied by something else. While the stupor remains, there appears little inflammation of the brain, but as the stupor abates the inflammation increases; and this constitutes the *third* stage. Much caution and prudence are required in the treatment of the first stage. A person is knocked down and becomes insensible; many have seen or heard of bleeding being employed when a person has fallen down suddenly, and the bystanders impatiently require that this shall be the first article of the treatment. But the breathing is slow, the pulse intermitting, and the extremities cold; and to draw blood in such circumstances as these would be taking the effectual method completely to extinguish life. Again, suppose people were to reason from the resemblance of the state in which the patient is in, to that of a person in a faint, and should as in that case give stimulant liquors by the mouth, or apply pungent substances to the nose, there is danger here, that by such appliances, the subsequent inflammation may be increased. The utmost that should be tried, is the endeavouring to restore the heat of the extremities by friction with warm cloths, or with stimulating embrocations; and we are to wait a little till we see whether the patient recovers from the first stunning effect of the blow, and to be regulated in our future treatment by the symptoms that occur. Those that we are principally to look for, are those of an inflammatory tendency; and to prevent the evils arising in the after stages of concussion, we are to employ bleeding and purging, to keep the patient in a dark room, to enjoin perfect quiet, and to put in force the antiphlogistic regimen.

BRAIN, Inflammation of. Inflammation of the brain and its membranes is characterized by very violent feverish symptoms, great flushing of the face, redness of the eyes, intolerance of light, and furious delirium.

Causes. These symptoms are occasioned by passions of the mind, by drinking spirituous liquors; and in warm climates by exposure to the sun, forming what is called *coup de soleil.*

Treatment. The treatment consists in large and rapid abstraction of blood, from the arm, the temporal artery, and jugular vein; in giving saline, cooling purgatives, and applying cold to the head. For this purpose, the head must be shaved, and cloths dipped in vinegar and water, or solution of muriate of ammonia are to be kept wet upon it; while we attempt to draw away the determination from the

head, by tepid or warm bathing of the lower extremities. If these means are unsuccessful, the danger is, that suppuration may take place somewhere in the brain, or on its surface, giving rise to compression of that organ, and fatal apoplexy. Or an effusion of lymph may be poured into the ventricles, giving rise to symptoms of water in the head.

BRAN. The husks or shells of wheat, which remain in the bolting machine. It contains a portion of the mealy matter; and a decoction of it is used as a drink in febrile diseases. This decoction is made by boiling a pint of water with two ounces of bran, till only three quarters remain; and then straining it. It is thought to have something of a laxative quality.

BRANDY. An ardent spirit obtained by distilling from wine. The properties of brandy, as of the other ardent spirits, depend on the alcohol which it contains, and this is stated by Mr. Brande at 59.39 per cent. by measure. The cases in which brandy may be used as a medicine, or permitted as an indulgence, may be known by referring to the article ALCOHOL.

BRANKS. The Scottish name for the Mumps. *See* MUMPS.

BREAD. A very important article of diet, made from the *farina* of various plants. This farina consists of different principles, a mucilaginous saccharine matter, starch, and gluten, which is a peculiar substance having many of the properties of animal matter. This latter ingredient is most abundant in wheat flour, and gives it its great superiority over that of barley, rye, oats, and other grain. In the making of bread, flour is made into a paste by mixing it with water in the average proportion of two parts of water to three of flour; and the older and better the flour, the greater quantity of water will be required. If this paste be allowed to remain for some time, a fermentation takes place; and by the action of the ingredients on one another, important chemical changes take place, and alcohol, carbonic acid, and acetic acid, or vinegar, are formed. If the paste be now baked, a loaf is formed, but of a taste very sour and unpleasant. This cold paste is what is called *leaven;* and if a portion of it be added to new made paste, the fermentation begins more speedily, carbonic acid is given off, but the gluten hinders its escape, and expanding like a membrane, forms numerous little cavities in a light and spongy mass. If there be too much leaven put into the paste, the bread has an unpleasant flavour; and if there is too little, it is compact and heavy. *Barm,* or the ferment that collects on the surface of fermenting beer, being added to dough, makes a bread superior to what is made with leaven; and is in this country generally employed for raising the bread. After the dough has been fermented, and properly raised, it is put into the oven, heated to about the temperature of 448°, and is there baked. Bread is very different from the flour of which it was made; the ingredients of the flour cannot be discovered in it; it mixes more easily with water, and is incomparably more digestible.

There are three different sorts of bread used in this country, the fine, the wheaten, and the household. Fine bread is made of flour only; wheaten bread of flour and a mixture of fine bran; and household is made of the whole grain, including both the coarse bran and the fine flour. The finer bread, from its greater quantity of starch, is apt to induce a degree of costiveness, which the coarse bread is enabled to counteract by its admixture of bran. Brown bread, or that made with a mixture of wheat and rye flour, is often usefully prescribed with a view to its laxative effect. As an article of diet, bread is of very great importance, for its nutritive qualities, and for its utility when joined with other food; both to correct the bad effects of too much animal diet, and to divide the aliment more completely by being intimately mixed with it. The best observations seem to prove, that a certain degree of distension of the stomach is necessary to proper digestion;

and, consequently, that we could not conveniently feed on essences and jellies, in which the nourishing parts of the food are concentrated into the smallest possible bulk; and that even very rich and nutritive soups are much easier for the stomach, when a proper proportion of bread is taken along with them. New bread is particularly unwholesome and indigestible, and should always be avoided, especially by patients troubled with indigestion. The only apparent exception is in the case of new rolls, which healthy stomachs manage to digest pretty well, provided they be well baked, and that the crust bears a considerable proportion to the whole. Toasted bread is a very useful article of diet for tender stomachs, and in the diet of invalids. Bread, in some constitutions and diseases, is apt to sour on the stomach, especially in children, in whom it is thought to produce flatulence and costiveness. Where acidity occurs, biscuit without butter should be substituted, or the bread should be toasted.

In the foregoing remarks on bread, we have had principally in view leavened wheaten bread; though bread may be made of rye, barley, potatoes, rice, and other substances; and although, strictly speaking, biscuits, cakes, bannocks, scones, and other unleavened mixtures are entitled to the appellation of bread. Most of the articles last mentioned are sufficiently nutritive, but hard and difficult of digestion, though they are excellently adapted for the powerful stomachs of those who are engaged in laborious and rustic occupations, the *dura messorum ilia*. The addition of butter to such articles before they are baked, is very apt to make them disagree with the stomach, and to make them sour.

A good deal has been said about bread being frequently adulterated. In large communities, some dishonest persons will probably adulterate bread, as well as other articles of food; but the evils of such practices have been much exaggerated. Bean flour, or potato flour, have occasionally been mixed with wheaten in the making of bread; and under ALUM we have stated the proportions of that substance which are very frequently added to increase the whiteness of bread.

BREAD-FRUIT TREE, *Artocarpus incisa*. A tree which grows in the Ladrone islands, in the South Seas, in Otaheite; and of late, in the West Indies. It is about the size of a middling oak, and yields a fruit about the size of a child's head, with a reticulated surface, something like the surface of a truffle. It is covered with a thin skin, and has a small core or central pith. The part which is eaten is between the skin and the core; it is perfectly white, and somewhat of the consistence of new bread. It is toasted before it is eaten, and has an insipid taste, with a slight sweetness, like that of wheaten bread and artichokes together.

BREAKFAST. The first meal taken in the morning. This is of considerable importance, as many hours have passed since the stomach was supplied with food; and as the morning meal is that which is to give strength to the system for the most active part of the day. Its time, its materials, and accompaniments, are therefore worthy of being well adjusted; although from the endless varieties of habits, constitutions, and employments, no fixed rules on any of these particulars can be given. During sleep, the whole of the food taken the night before has probably been digested; and we might expect the appetite to be keen in the morning, from the circumstance of the gastric juice being secreted in abundant quantity and of great activity, during the long interval; while the muscular powers of the stomach are refreshed by rest, and ready to resume their functions; but, in general, it is proper to interpose some time between rising and taking breakfast; though many feel such inanition and feebleness, that they are unfit for any of the duties of life till they have taken some food. In this, every one must decide for himself.

The quality of the food to be eaten at breakfast is to be regulated by the exercise and labour to be taken, and by the time that is to elapse before dinner. The physician would be much inclined to interdict luncheons; and therefore to recommend a considerable proportion of solid food at breakfast. Cold mutton, or beef, or after the Indian custom, fish and rice, or eggs, may be taken at breakfast. Hard boiled eggs, being nutritive and slow of digestion, are a good article of diet for those who are to fast long. Copious breakfasts, however, are apt to be heavy to many stomachs, and to occasion heartburn, especially when a great deal of liquid has been taken along with them; but this does not show any cause against a proper quantity of diluting drink at breakfast. The expenditure of fluid by insensible perspiration, which has taken place during the night, with the greater acrimony of all the secretions in the morning, point out the propriety of a considerable quantity of diluting fluid at the morning meal; and the choice of this fluid must be left in general to each person's experience of what agrees best with him. Tea agrees well with most people; but with many it occasions heartburn and acidity; perhaps the fault may not be in the tea, but in the quantity of new bread, or of butter, taken along with it. Trials must be made, by omitting one or more of the articles taken, till it be ascertained which of them is in fault. If tea or coffee are found to disagree, milk or gruel may be substituted.

BREAST in general, signifies the Chest. Hence we hear of pain in the *breast*, *pectoral* medicines, &c. It will be better to treat of Breast Complaints under the article CHEST, and to restrict the word Breast to the subject of the following article.

BREAST, FEMALE, *and the Diseases to which it is subject.*—The breasts consist of common integuments and fat, with glands and vessels, for the purpose of secreting milk, and discharging it for the first nourishment of the child. On the middle of each breast is a small eminence, which the child takes into its mouth; and a vacuum being formed by its suction, the external air pressing on the breast forces the nutritious fluid into the child's mouth. Round each nipple, there is a dark brown circle called the *areola*. From the variety of parts of which the breast is composed, it is liable to various diseases, as inflammation, suppuration, and cancer. 1. *Inflammation.* Like all other parts, the breast may inflame from external violence, or from internal and unknown causes; but one of the most frequent causes of inflammation there, is the strong rush of blood to the part shortly after delivery. Previous to the birth of the child, a great quantity of blood is sent to the womb to supply materials for the growth and nourishment of the embryo; but when the child is born, and requires food of another sort, the blood then flows in great quantity to the breasts, and occasions in some constitutions a smart febrile attack, known by the name of the *milk fever;* and, in others, severe local pain of the breasts, followed by suppuration. Independent of the milk fever, inflammation and abscess of the breast may arise from checking the flow of milk at too early a period, from exposure to cold, fright, mental anxiety; too great motion of the arm when the breast is large and distended, blows, and pressure from tight clothes. But the abscess of the breast often occurs, when no obvious cause can be assigned. The pain arising from the inflammation of so large and tender a structure is very great; and, happening in constitutions already enfeebled and irritable from the child-bed state, it occasions very severe distress. The breast sometimes puts on the appearance of several distinct swellings, has a knotted feel, and the pain often extends to the arm-pit. At first, we must endeavour, if possible, to put a stop to the inflammation, and to prevent its coming the length of suppuration. This is to be done by giving frequent doses of cooling laxatives

as of salts; by applying cold or tepid fomentations to the breast, and by attempting to have the milk regularly drawn off. We are also to apply leeches in great numbers, and to rub the breast gently with a little warm oil. The diet is to be spare and cooling.

2. *Suppuration.* If we fail in relieving the inflammatory state, our next endeavour is, to promote the suppuration by poultices, and to discharge the matter when ripe, by a large opening. When a suppurating breast is left to itself to break, it too frequently allows the matter to work itself into various winding holes, and to make its way out by different openings, occasioning a long and wasting discharge; to prevent this, there is no method so sure as making a large and free incision, and laying open through all their depth, the hollows from which the matter flows. When a hardness remains in the breast after inflammation and abscess, it is to be dispersed by friction with camphorated oil, or mercurial ointment; attention being paid to the avoiding of external injury; and the general health and state of the bowels is to be looked after.

3. *Scirrhus and Cancer.* The breast is also subject to what is called a schirrous hardness; and this too often is the commencement of one of the most distressing maladies to which the human frame is liable. This hardness, after continuing for a length of time, without any apparent tendency to change, sometimes from a slight blow or other injury, sometimes without any obvious antecedent cause, is succeeded by pain, inflammation, ulceration; in short, degenerates into the disorder too well known by the name of *cancer,* which has hitherto baffled all the powers of medicine to effect its cure. As cancer may affect other parts of the body as well as the female breast, we shall not detail the particular symptoms till we come to the article CANCER itself, but shall state, that for the prevention of the last and fatal stage of cancer in the breast, with the long train of misery and despair preceding it, it is found that there is no certain remedy but cutting off the part This appears a harsh and terrible proposal; but long and melancholy experience has evinced the absolute necessity of it; and has demonstrated the ignorance or the knavery of those, who, with such unblushing impudence, promise a cure o every case of cancer, without having recourse to the knife. When a breast is affected with scirrhous hardness, and with some other kinds of soft swelling which are known to have a tendency to become cancerous and malignant, we ought to advise the extirpation of the part; and as the progress is generally unceasing and unrepressible, we ought not to waste time in the use of internal remedies, from which no good has ever been found to result. Here is the opportunity for the candid and skilful surgeon to give his opinion tenderly but decidedly: to discriminate carefully between the various kinds of hardness which may occupy the female breast, without leading to any bad consequences; and those which, if left to themselves, will be decidedly fatal. Much also will depend on giving the advice at a proper time. After a certain continuance of the disease, it spreads its baneful influence so deep and so extensively, that the operation is likely to do no good, but on the contrary to accelerate the fatal termination of the disease; and unless the whole of the diseased portion, in all its ramifications, be cut out, the malady will assuredly return; and it is by such occurrences that the operation is in too many cases brought into discredit. When the operation is resolved upon, it is a matter of great importance not to rest satisfied with removing merely the tumours, but a considerable portion must be cut away of the surrounding substance. In cutting out a diseased breast, particular care must be taken to remove various white bands, which radiate into the surrounding parts, and which, if left, would infallibly occasion a relapse. It is proper also to remove a very considerable portion of skin, as it is frequently found, that on occasion of a relapse, the disease makes its re-ap-

pearance in the skin. It is reckoned a matter of prudence, nay, of necessity, to remove the nipple in every case where it is at all near the scirrhous hardness; and wherever the skin appears discoloured, puckered, or closely connected with the hardened parts beneath, it should be completely removed. We hear often enough of the operation for cancer being unsuccessful, and many pretenders are fond of every opportunity of throwing discredit upon it; but by far the majority of what appear to be relapses, should be considered as mere continuations, the diseased part never having been completely removed. The best posture for the patient to be placed in for the operation, is a recumbent one; and this the more especially, when the operation is likely to be long, or attended with much loss of blood, and consequent fainting. The mode of performing the operation, however, is not a fit subject for a popular work. The arm of the side from which the breast has been removed, should be kept from motion by being put in a sling; and this is obviously necessary, as every motion of the pectoral muscle is apt to derange the dressings and plasters of the part. After the operation is over, the patient should be put to bed, and should have a full dose of the tincture of opium, to allay irritation and procure sleep.

BREASTS OF INFANTS, SWELLING OF. A few days after birth, a milk-like fluid forms in the breasts of infants of both sexes, producing swelling and inflammation. The fluid sometimes oozes out, and the uneasy feelings are relieved. Little else is required for these swellings than rubbing them with warm olive oil, night and morning; or dusting them with fine flour, or bathing them with milk and water. Forcibly squeezing these delicate parts of a new-born infant, as is often done by ignorant persons, should be strictly forbidden; as inflammation and suppuration may be the consequence, or permanent injury may be done to the breasts, especially of female children.

BRIMSTONE. *See* SULPHUR.

BRISTOL HOTWELL. A warm, slightly acidulated mineral spring, situated about a mile below Bristol. The fresh water is clear, sparkling, and free from smell. It is agreeable to the patient, but has no very decided taste; and there seems to be very little admixture of foreign ingredients. The temperature of the waters is about 74°, and continues pretty equable through the whole year. From the various investigations of chemists, it appears that the principal component parts of the Hotwell water, are a large portion of carbonic acid gas, and a certain portion of magnesia and lime, in various combinations with the muriatic, sulphuric, and carbonic acids. Almost all common spring-water contains solid matter of the above description; and as the Hotwell of Bristol contains less than usual, it may be regarded as very pure for a natural fountain. The water of Bristol Hotwell is useful in obstruction and weakness of the bowels, and in some complaints of the urinary organs. But it is chiefly in pulmonary consumption that the sanative effects of the Bristol waters are celebrated. Much of their apparent good effects may be ascribed to the favourable situation and mild temperate climate which Bristol enjoys; but it is also asserted, that the water alleviates many of the most distressing symptoms of that disease. It is said to be very efficacious in moderating the thirst, the burning heat of the hands and feet, and other symptoms denominated hectic; and thus, in the earlier stages, it may be successful in removing bad symptoms, or even in restoring to health; and may contribute, in the latter stages, to mitigate the sufferings of the patient in a disease that cannot be cured. The sensible effects of this water, when drank warm and fresh from the spring, are a gentle glow of the stomach, succeeded sometimes by a slight and transient degree of headach and giddiness. It is diuretic, it keeps the skin gently moist and perspirable, and improves the appetite and health. In some constitutions, it disposes the bowels to be rather

costive; it is, therefore, proper to interpose an occasional laxative. Patients generally resort to this well during the summer months, and thus enjoy the concomitant benefits of air and exercise.

BROCOLI, *Brassica Italica.* A species of cabbage, which furnishes a very agreeable article of food. Persons afflicted with indigestion should avoid this, as indeed they should abstain from the greatest number of vegetables; as it is apt to induce flatulence, and its effects, nauseous eructations and griping of the bowels.

BRONCHOCELE. The goître, or swelled neck, which so frequently occurs among the inhabitants of mountainous regions. It is a common disorder in Derbyshire, and among the inhabitants of the Alps, and other hilly countries in their neighbourhood; also in the valleys of Savoy, and at Milan, and among the Pyrenees, and Cevennes in France. The swelling in bronchocele is at first without pain or any evident fluctuation, and the skin retains its natural appearance; but as the swelling advances, it grows hard and irregular; the skin becomes yellowish, and the veins of the neck put on a distended and winding appearance; then the patient complains of frequent flushings of the face, with headach, and pains darting through the tumour. When the disease has continued long, and the swelling is great, the cure is difficult; and from the largeness of the arteries which supply it, we can hardly venture on its extirpation by the knife; but in the early stages of the disease, something should be attempted by internal medicines, assisted by frictions with camphorated mercurial ointment over the tumour. We may also apply blisters, cooling lotions, and soap plasters; but we are also to use internal remedies; and of these the most successful is the burnt spunge. It was long a question, on what ingredient of its composition its virtues depended; but it seems now to be ascertained, that it is owing to the iodine which enters into it; and this iodine may be employed separately under the form of solution in alcohol, by which its dose can be accurately divided and ascertained. Thirty-six grains of iodine may be dissolved in an ounce of alcohol, and of this, ten drops may be given three times a-day in any viscid liquid; this dose may be gradually increased to twenty drops. This substance may also be used in the form of hydriodate of potassa; forty-eight grains are dissolved in an ounce of water, and from ten to thirty drops are given of this solution. Iodine has also been employed externally in the form of ointment, when the stomach has refused it internally. Half a drachm of hydriodate of potassa mixed intimately with an ounce and a half of hog's lard may be used as an ointment; rubbing in upon the tumour, night and morning, a piece the size of a garden bean. In decided goître, the effects of iodine are very remarkable; it softens the tumours, and gradually promotes their absorption; but it is proper to alleviate any local inflammatory action, and to strengthen the constitution by tonics. If any feverish symptoms occur, the iodine should be discontinued; and also where it occasion cough, restlessness, laxity of the bowels, and emaciation.

It is an interesting subject of inquiry, what circumstances render the inhabitants of certain districts more especially liable to this disease. As it has been observed, that districts abounding with saline and mineral springs exhibit more instances of this disease than other places, the impregnated waters of these parts have been supposed capable of producing the disease in question. The use of snow water has been thought to give rise to swelled necks; but this is rendered improbable, by the frequent occurrence of the disease in Sumatra, where snow and ice are never seen; and it is remarkable, also, that the disease rarely occurs in Thibet, though the rivers there are chiefly supplied by the melting of the snow, with which their mountains are always covered. Bronchocele is believed, like scrofula, to be a disease transmitted from the

parents to their offspring; and its occurrence among the inhabitants of certain districts, is ascribed to their being in some measure excluded from the rest of mankind, and intermarrying with each other. The swelled neck is in very many cases connected with cretinism or fatuity; although in frequent instances, the bronchocele is totally unaccompanied by any degree of idiotism.

BRONCHOTOMY. An operation by which an opening is made into the upper part of the wind-pipe. The object of it is to make a passage for the air to and from the lungs, when any thing occurs to prevent it from its usual course. This may happen from an inflamed throat, from a tumour, from a foreign body having fallen into the wind-pipe; and the operation is sometimes necessary in cases of drowning, to enable the practitioner to inflate and empty the lungs, in order to imitate natural respiration. The manner of performing the operation is to place the neck a little on the stretch, by bending the head backwards; then to begin an incision below the cricoid cartilage, and to continue it downwards about two inches. The incision of the integuments being made, we are then to bring the wind-pipe fairly into view, and to introduce the knife below the third ring of the wind-pipe, and to cut perpendicularly downwards. Though the operation is not a difficult one, it is necessary to observe certain cautions. In some persons arteries of considerable size may depart from their usual distribution; and the knowledge that such irregularities have been met with, will put the surgeon on his guard, and make him aware of the necessity of not using the knife, farther than merely to divide the skin and coverings. The wind-pipe must be cleared with the fingers, and careful examination made before the knife is introduced into it.

BROOM, *Cytisus scoparius*. A decoction of the tops of the common yellow broom has been celebrated in dropsy; and in some cases, it has done good by its diuretic powers; but we have other diuretics so much more certain in their operation, that we need not place much reliance upon the broom.

BRUISE. *See* Contusion.

BRYONY, the Wild Vine, *Bryonia alba*. A perennial plant, growing on dry banks, under hedges, and climbing upon the bushes. The roots are large, their smell when fresh strong and disagreeable, the taste bitter and acrid. The action of bryony on the body is that of a strong irritating cathartic; and it has been used with success in cases of mania, and in some kinds of dropsies. From twenty to thirty grains of the powdered root may be given. Half a drachm of the watery extract is said to operate powerfully by urine. It is a medicine not much used by modern practitioners.

BUBO. A swelling in the glands of the groin; but the swelling of glands in the arm-pit is sometimes called by the same name. The swelling of these glands arises from different causes, from irritating matter absorbed in some part of their course, by the lymphatics which pass through the glands, from certain diseases, and from local irritation. A remarkable instance of general disease occasioning bubo is seen in the plague; a conspicuous symptom of which is the inflammatory swelling of the groin, and occasionally of the axillary glands, or of the parotid. Buboes sometimes appear on the first day of the complaint, sometimes a few days later; and it is thought that the cases are worse when no buboes appear. These buboes vary in the rapidity with which they advance to suppuration; when this takes place, the swelling should be opened with the lancet, and the matter discharged.

Buboes *from the absorption of morbid matter*. The most common instance of this, is the swelling of the glands in the groin from the absorption of the venereal virus. Such buboes inflame and suppurate, sometimes very rapidly; but in some constitutions, as the scrofulous, the progress is slower, and it is also retarded by

mercury, employed for the cure of the venereal disease. The pain is acute, and the skin is of a bright red colour.

Treatment. When the surgeon sees a bubo not very near to suppuration, he is to attempt the resolution of it, if possible. This is to be done by diminishing inflammatory action, by purgatives and tepid applications to the swelling, and by a general bleeding if there is much fever. When we design to cure the original disease by mercury, we are to rub it upon the thigh; and also, if possible, on the parts between the sore and the inflamed gland; and, generally, when the disease is taken in time, the buboes will disperse, and the sores heal; the mercury being continued prudently for some time after the buboes have disappeared. When they have suppurated, they are to be opened by the lancet, and poulticed for a day or two; and the mercury must be continued till we have reason to think that the matter discharged is not venereal; but we need not always continue it till the bubo is quite healed. Sometimes buboes degenerate into very foul and extensively corroding ulcers. Much doubt is entertained whether this is owing to the venereal poison, or to the combined influence of the poison and mercury. Different methods are to be tried in this instance. The use of mercury must be suspended; poultices of hemlock are to be applied to relieve the pain and irritation; and sarsaparilla in powder, or decoction, is to be given internally. Bark, and the preparations of iron, with a moderate allowance of wine, are to be given when there is much debility.

BUBONOCELE. A swelling in the groin from that kind of rupture in which some of the contents of the abdomen pass through the ring of the external oblique muscle. *See* RUPTURE.

BUCKTHORN, *Rhamnus catharticus*, a tree or bush which grows in hedges, flowering in May and June, and ripening its fruit in September or the beginning of October. The berries have a nauseous bitter taste, and were long in considerable esteem for their purgative effects, and were celebrated in dropsy, in rheumatism, and the gout. They produce gripes and sickness, with dryness of the mouth and throat, and long continued thirst. A syrup made by adding two parts of the clarified juice of the berries, to one of white sugar, was frequently prescribed to children in the dose of one or two tea-spoonfuls; but buckthorn may easily be dispensed with in any shape; and children will take aloes suspended in treacle, and retain it on their stomachs as easily as syrup of buckthorn.

BURGUNDY. A wine classed among those which are called dry and light, possessed of stimulant properties greater than can be explained from the proportion of alcohol it is found to contain, that being only about 11½ per cent. Burgundy is, therefore, thought to hold dissolved some unknown principle of great activity. A few glasses of this wine will induce headach and heat of the system, with flushed face, and hardness of pulse. These effects soon subside, and are followed by no inconvenience. In some constitutions, however, this temporary vascular excitement may be very unsafe; and those who feel themselves troubled with drowsiness, or giddiness, for any length of time after taking Burgundy, should avoid this wine in future.

BURNS. From the frequency of their occurrence, and the destructive effects they produce, burns and scalds form an interesting subject to every medical practitioner; and from their very frequent occurrence in domestic life, and in the ordinary occupations of society, it is highly expedient, that every person not professional should know what is to be done at the moment of such an accident, in order that neither any thing improper should be applied, nor precious time lost in waiting for the coming of the surgeon. To speak accurately, we should apply the word *burn* to injuries from heated solids, and *scalds* to injuries inflicted by heated liquids. The first effects of burns or scalds are, very acute pain, destruction of the

skin and subjacent parts, a raising of the outer skin with one or more blisters below it, extensive redness of the skin, followed by suppuration and great discharge of matter, the parts healing with great difficulty. The appearances presented by burns differ according to their violence and extent. Some may only irritate the skin, while others destroy the skin and parts more deeply seated, as the muscles, tendons, &c. The injury from scalds is generally more extensive, though not so deep as that from burns; and the danger appears to be in proportion to the extent more than to the violence of the injury; or rather it is to be estimated by considering the extent and violence together. The worst burns that occur, arise from the burning of inflammable gases, from gunpowder, from the boiling over of hot fluids, as painters' oil, or fluids in laboratories; from the dresses of females taking fire, from children pulling over on themselves tea, broth, or boiling water, and such like accidents. Burns which only irritate the skin without destroying it, are very similar in their effects to the substances used in medicine for blisters and rubefacients. The vessels of the injured part pour out a fluid under the cuticle, which is raised into one or more blisters. But when the skin has been destroyed, no vesicles appear, but a black dead slough. This is detached after some time; and as ore is seen more or less deep, according to the degree of the injury. When a large surface is burnt, mortification sometimes makes its appearance with great violence, very quickly after the accident; but in general, the occurrence we have to fear, is great inflammation, and consequent suppuration. In many cases, the inflammation is not merely local, but gives rise to general fever, requiring strong constitutional remedies. Soon after an extensive burn, the patient is affected with great nervous irritation, and trembles violently; there is coldness of the surface, paleness of the skin, and sometimes vomiting. The extensive sympathy between the lungs and the skin as excreting organs, renders an asthmatic affection not an unusual attendant on burns; and from extensive burns the stomach also is much affected.

Treatment. There is no part of surgery on which there has been greater difference of opinion, than the treatment of burns; and even the remedies popularly trusted to are very various. It must be admitted, however, that while medical writers have suggested applications, absolutely pernicious in spite of all the plausible theories with which they have recommended them, the remedies known among the people are only more or less salutary; and common sense has preserved them from the improper practice of applying boiling water or turpentine, to an injury requiring to be treated by far gentler means. It is not our intention to enter into any discussion of the comparative merits of the different applications that have been recommended, but simply to state what in general the most judicious practitioners have found to be successful. We shall first suppose that a person has received a pretty extensive scald, and that assistance is promptly at hand. Supposing the skin unbroken, whether blisters are rising or not, we would strenuously recommend the instant application of cold to the injured part. A ready mode of doing this, is by adding one part of vinegar to one part of water, taking a towel or many folds of soft linen, dipped in this mixture, and keeping it constantly wet to the part, continuing this cooling treatment for a longer or shorter period, according to the continuance or abatement of the pain; We have mentioned vinegar and water, as a good means of applying cold, because, besides its intrinsic excellence, it is generally at hand; but supposing it not to be readily got, we may attempt the same effect by cloths soaked in cold water alone, or spirits and water; always on the supposition that the injury does not destroy the skin, or at most only the outer skin. If there is a deep injury, any acrid substance added to the water, as vinegar

or spirits, would be too painful to be borne, and would only add to the irritation; it is therefore better to use oily applications, and of these the Carron Oil is one of the most famous. It is made by mixing equal parts of linseed oil and lime water; this is to be plentifully smeared on the place burnt, with a feather or hair pencil, and a single fold of linen placed over it to prevent the access of air. Immediately after the first application of the cooling wash, or oily matter, if the paleness and shivering be great, a full dose of laudanum should be given, proportioned to the age of the patient. During the cure, the diet should be moderate; and no strong drink allowed, except perhaps a little wine and water, or spirits, at first, as a cordial to assist in restoring an equable heat to the system, and to put an end to the depressed and pallid state. In many cases, the application of cold will accomplish the resolution or cure of the burn without further trouble; the skin will not rise in blisters, and at the worst the outer skin will dry and peel off. Or supposing blisters have arisen, when the pain has ceased, they may be pricked with a needle, and the fluid allowed to escape, keeping the skin on as long as possible. It may happen that the pain abates, and the skin comes off, leaving the part below in a state of ulceration or suppuration; in this case, emollient poultices are to be applied till the suppuration appears inclined to cease, and then the sores are to be dressed with cerate, lard, Goulard's extract, or the like. In the dressing of burns, care must be taken to keep the raw surfaces from contact, to prevent them from growing together. Thus the fingers must all be dressed separately; joints should be extended so as to prevent them from being permanently bent; and the chin must be kept from growing to the breast. It is a disagreeable and frequent characteristic of burns, that they are apt to be accompanied with great rising of proud flesh, and to leave unsightly scars, much above the level of the skin. The rising flesh must be eaten down by blue vitriol, by lunar caustic, or other escharotics; and the new skin kept to its level by proper bandaging and adhesive plaster. When the clothes are set on fire, or when, as too often happens, old persons intoxicated, or incapable of taking care of themselves, fall into the fire, deplorable consequences ensue. Large eschars are formed and drop off, extensive ulceration and exhausting suppuration take place, and death at a longer or shorter period follows. We must dress the sores with all the care and skill possible; and support the strength with bark and wine, and nutritious diet, to give the constitution, if possible, the power of supporting the copious discharge.

A remedy which has in some cases appeared to do good, and has of late been much celebrated, is to apply cotton to extensive burns. The good effects of this are owing to its protecting the tender nervous extremities of the injured part, from the contact of the external air. As formerly hinted, some practitioners have adopted a theory to satisfy themselves about the application of turpentine to burns; but as this practice has not yet made its way beyond the profession, it is unnecessary to caution the general reader against its adoption.

BUTTER. An unctuous substance obtained from the milk of animals, and most plentifully from that of the cow. It is got by long continued agitation, which operation is called churning. It is universally used as an article of diet; and when thinly spread upon bread, there are few stomachs with which it disagrees. Butter is used as a sauce to many articles of food, and is frequently added to flour to be baked into paste; and it is in this way that it is too often used to excess; and though it does not produce effects that are immediately apparent, it lays the foundation of stomach complaints of the greatest obstinacy. Its use is also very apt to give rise to diseases of the skin, very difficult to cure. Persons labouring under stomach complaints should not use much butter, especially when heated, as

in buttered toast, muffins, &c. and those subject to inflammatory and gouty affections, should be sparing of the use of butter in all its forms. It is a bad part of the management of children, to pamper their palates by frequently indulging them with butter; as it is apt to give rise to a gross and unhealthy habit of body, characterized by the frequent appearance of boils and other sores, discharges from behind the ears, &c. or eruptions on the head, and other parts of the skin. Its immoderate use also occasions too great fulness of the system; and in the numerous nervous and inflammatory diseases of children, it is the high fed and plump children that are most frequently the severest sufferers. Butter, when rancid, is peculiarly unwholesome and disagreeable.

BUTTER-MILK. The milk that remains in the churn after the butter is extracted. There is not much nutritious matter in it, but it is useful as a cooling drink, and may form a considerable part of the diet of children.

BUXTON WATERS. Warm mineral springs at Buxton in Derbyshire, which have been long celebrated for their medicinal properties. The temperature is 82°. In this spring there is a large quantity of elastic vapour, that rises and forms bubbles, which pass through the water, and break as soon as they reach the surface. These bubbles have been ascertained to consist of azotic gas, mixed with a portion of atmospheric air. From its temperature, it is used as a bath, although probably not much superior in its virtues to common water; but it forms a bath very proper for delicate and irritable habits. The cases which are said to derive the greatest benefit from the external use of Buxton water, are those in which some limb is affected with loss of action or sensation, from rheumatism, or external injury. The internal use of the water is of service in complaints of indigestion, and derangement of the alimentary canal. The water often relieves the heartburn, flatulency, and sickness; it increases the appetite, and gradually improves the health. When first used, a laxity of the bowels is induced, and this is rather beneficial than otherwise; but costiveness is a more frequent effect. In disorders of the kidneys and bladder, the Buxton water is beneficial; it is also recommended in gout; but with the addition of some aromatic tincture. The waters are not to be taken in cases where there is a tendency to active inflammation. The quantity used is about two-thirds of a pint an hour before breakfast, and the same quantity between breakfast and dinner. The water should be drank after, and not before, bathing. Much of the good to be derived from the Buxton waters, is to be ascribed to the purity of the air, to the relaxation from business, to the picturesque scenery in the neighbourhood of the Peak, and to the fine season in which the waters are drank.

C

CABBAGE. *Brassica capitata.* A plant, of which the leaves are used at the table. Cabbages contain a peculiar essential oil, which is the cause of the bad smell of water in which they have been boiled; this oil is sometimes offensive to the stomach. Some, therefore, recommend to boil them in two waters; that is, when they are half done, to take them out, and put them directly into another saucepan of boiling water. This removes the hurtful ingredient, and renders them soft and digestible. In some parts of the Continent, they have a mode of preserving cabbage with salt and caraway seeds, which renders it very useful as a part of sea-store on long voyages. *See* Sour Crout.

CACHEXY. A bad habit of body, consisting of a want of vigour in the solid parts, with an unhealthy state of most of the fluids; and showing itself in universal languor, bad digestion, diminished heat, strength, and activity. The skin is pale, yellow, or dark; and the white of the eye is bluish or pearly. Cachectic persons are easily tired, and have a difficulty of breathing from very slight exercise; they are oppressed during sleep, and the urine is white and turbid. Those who are most subject to this bad state of body, are those of a soft and lax habit, and of the phlegmatic temperament; women are more subject to it than men.

Causes. The symptoms above enumerated, and some other signs of debility occurring in various degrees, are generally to be considered as the indications of some internal disease, most probably some organic disorder of the parts concerned in digestion, diseased stomach or liver, or mesenteric glands. This bad habit of body is often connected with fatal diseases, or passes into them, as jaundice, dropsy, scurvy, or hectic fever. It may be brought on by long continued anxiety, a sedentary life, indulgence in spirituous liquors, and too copious evacuations. Sometimes we cannot say that it is connected with any particular disease, nor are we always able to trace its cause.

Treatment. We are to endeavour to correct the bad quality of the fluids, to strengthen the stomach, and to invigorate the system. The diet, therefore, should be nourishing and of easy digestion, the quantity being proportioned to the powers of the stomach to convert it into wholesome chyle. It is a common and hurtful error, to throw in a great deal more food than the debilitated stomach can manage. Thus its feeble powers are still farther oppressed; and the undigested food acts as a stimulant or purgative, or excites vomiting and uneasiness which the patient is ill able to bear. It would be improper to specify any particular articles of diet, as applicable to a state of the health which presents so many different symptoms, and which may arise from so many various causes; what would be good in jaundice or dropsy might be injurious in scurvy, and we are therefore to direct such aliments as are suited to each case. (For the general principles on which diet is regulated, *See* DIET *and* DIGESTION.) Exercise should be regular and constant, but never to the extent of fatiguing the patient. The bowels are to be attended to, and kept regular by mild laxatives; and bitters, aromatics, and chalybeate medicines are to be given. As purgatives, rhubarb and aloes are useful in many cachectic cases; calomel and other forms of mercury are also of service; especially in those cases where there seems to be a hardness or obstruction of the internal organs.

There is a species of cachexy, a bad habit of body, incident to females, and connected with irregularities of the monthly discharge. It is commonly known by the name of *green sickness*, and in medical language *chlorosis;* and as it is an affection that requires great care and skill in its treatment, we have fully detailed its symptoms and management under the article CHLOROSIS.

CADDIS. Scraped linen or lint used for the dressing of sores. *See* CHARPIE.

CÆSARIAN OPERATION. An operation performed on parturient women, by which the fœtus is taken out by an incision made through the abdomen and the sides of the uterus. There are three cases in which this operation may be necessary. 1. When the fœtus is alive and the mother dead, either in labour or during the latter periods of pregnancy, when the child would be likely to live if delivered. 2. When the child is dead, but cannot be delivered in the usual way, on account of the deficiency of space in the passages. 3. When both the mother and child are living, but, from the same deficiency, the child cannot be delivered in the usual way, with safety to the mother. On each of these cases we proceed to make some remarks.

I. We may suppose a case to happen, where sudden death overtakes a woman near the end of her pregnancy. We are sure that one life is gone, but that there is a possibility of the child being preserved: or we may take the case of a woman who dies in labour, before the child is delivered. There is something so horrid, in proceeding forthwith to cut open the unfortunate woman, that we ought to be absolutely certain of saving the child before we attempt it; and this can rarely be the case; for what causes the death of the mother is pretty sure also to cause the death of the child; and if so, any operation on the mother would be fruitless. If a woman has died in labour, and if the uterus is in any measure dilated, we must attempt to deliver by the natural passages. And if we decide on attempting to extract the child, we must proceed on a woman newly dead, or supposed to be so, (for at least one instance is recorded where the woman, though apparently dead, was not so) with the very same precautions as if we were operating on the living body.

II. A cause which may make it necessary to have recourse to the Cæsarian operation, is such a contracted state of the various diameters of the pelvis, as renders them insufficient to allow the head of the child to pass. The size of the head varies much in different children; and the sutures of the head being soft and yielding, the bones are allowed to overlap one another in some measure; but it is acknowledged, that unless the head can be forced into a space not more than three inches in one direction, nor more than two inches in another, delivery is impossible. Such are the dimensions which can by possibility pass through a pelvis; and we have to ascertain in each case, whether the pelvis is large enough to allow the head to pass. Various compasses have been invented for making this measurement; but it is a matter of great difficulty to apply them, and the information obtained is by no means satisfactory. As the judgment of this point will always be left to professional men, we shall not enlarge this article by minute technical details; but proceed to inquire in what cases we are to perform the Cæsarian section if the child be dead. It is not easy to ascertain whether a fœtus be dead or not. If after being affected with violent motion, it has ceased to move, it is in all probability dead. But we are not to trust to this, but to employ manual examination. One method of this examination is, to press upon the womb firmly through the walls of the abdomen; and this pressure will cause the child to move, if it be in life. Another method is, to press upon the uterus externally, at the same time making corresponding pressure with the fingers of the other hand. If no certain indications are given this way, the membranes must be ruptured, and the hand introduced into the uterus; a finger or two placed over the region of the heart to examine whether it be beating; and also to examine whether there is any pulsation in the umbilical cord. When we cannot perceive any signs of life by any of these methods, we are to conclude that the child is dead, and are to extract it; but if the hand cannot be introduced into the uterus, we must, if we deliver at all, do it by the Cæsarian operation.

III. That both mother and child have lived, when the latter has been brought away by the Cæsarian operation, has been abundantly ascertained, at least on the Continent; but in Britain, with only one exception, the operation has uniformly proved fatal to the mother. The causes of the greater success of the Continental practitioners are supposed to be some of the following: 1. They are not so long of having recourse to the operation. 2. The less frequent use of animal food and of strong liquors, predisposes women less to inflammatory attacks. When Dr. Hull wrote, 231 cases were recorded of the operation; of which 139 were successful. The operation is now commonly performed in the following manner: Some advise the incision to be

made in the middle line of the belly; others recommend it to be made transversely, in the direction of the fibres of the transversalis muscle. Mr. Burns of Glasgow prefers the transverse incision. The length ought to be about six inches; and if there is any large vessel cut, it is proper to tie it before proceeding farther. The uterus is next to be opened by a corresponding incision, and the child is to be extracted, and immediately afterwards, the placenta. One assistant is to take charge of the child, and another to prevent the protrusion of the intestines. As the operation is seldom had recourse to, till there are symptoms of the uterus contracting itself, we may generally trust to those contractions of the uterus to check any bleeding from it; and we are to bring together the sides of the external wound, and to keep them in contact by a proper number of stitches passed through the skin and muscles, but avoiding the peritoneum. Adhesive plasters are to be applied where there are no stitches; and a bandage with a soft compress is to be put on. An opiate in a full dose should be given; and great care must be taken afterwards to prevent inflammation, as well as the loss of blood, and the access of the external air.

CAJEPUT OIL. A volatile oil of a greenish colour, with a smell resembling camphor and turpentine, said to be obtained from the *Melaleuca Leucodendron*. It is a powerful medicine, and much esteemed in India in painful chronic diseases. Taken into the stomach in doses of five or six drops, it is heating and stimulating, and also diaphoretic. It is thought useful in various convulsive and spasmodic complaints. It has also been used both internally and externally in palsies, rheumatism, gout, toothachs, deafness, and in hysterical and hypochondriacal affections. It is said to be destructive to the insects which infest the collections of natural historians.

CALAMINE, *Carbonate of Zinc;* an ore of that metal, and an article of the materia medica. It is roasted and calcined, to free it from any arsenical or sulphurous particles it may contain; and, when properly prepared, it is used in certain eye ointments; and dusted on moist ulcers, to prevent the spreading of the acrid matter. It is also the basis of the useful cerate, commonly known by the name of Turner's cerate.

CALCINATION. When certain metals are exposed to a strong heat, they lose their lustre and metallic properties, and are converted into an earthy-looking substance, formerly called *calx*, and the metal was said to be calcined. Modern chemistry has ascertained that the metal in this process attracts oxygen from the air; and hence the term *calcination* is changed in the case of metals into oxidation. But several other substances are often exposed to heat, in order to drive off some of their component parts; and to them the term calcination is still applied. Thus, when the carbonic acid is expelled by strong heat from the carbonate of magnesia, the residue is said to be *calcined* magnesia; or when the water of crystallization is driven off from alum, the alum is said to be *calcined.*

CALCULOUS DISEASES. *See* STONE.

CALENTURE. A name formerly given to a species of fever occurring in warm climates; one celebrated symptom of which is, that seamen affected with it are seized with high delirium; and imagining the sea to be a beautiful extended plain, in their ardour to enjoy the scene, throw themselves overboard.

CALF'S-FOOT JELLY. An article of diet, made by confectioners, and also in domestic cookery, by extracting the gelatinous portions from the tendinous structures of the feet and knee-joints of the calf, by long boiling; and adding to the jelly thus obtained, a quantity of sugar, wine or oil, and spices. It is grateful to the palate, and easily digestible; hence it is a useful article in the diet of convalescents, and may be taken cold, or dissolved in warm water, according to cir-

cumstances. In inflammatory states of the system it is improper.

CALLOUS, a term applied to the hard and insensible edges of sores.

CALLUS, the substance thrown out by the extremities of broken bones. On this subject, there used to be very strange theories among the older surgeons. They believed it to be an inorganic substance, a fluid poured out from the vessels at the ends of broken bones, which was soon hardened into bone. It was supposed to flow sometimes too sparingly, sometimes too abundantly; and many contrivances were invented to compress, and to keep down the exuberant supply. Physiologists have now juster notions on the subject; and are agreed that callus is a reproduction of new and perfect bone, furnished with arteries, veins, and absorbents; and in which the same processes go on as in the original healthy bone. Many still suppose, that a very slight motion will destroy a callus, which is about to form. But though we would not unnecessarily disturb a broken bone, there is no reason to fear this disunion; for when callus begins to be formed, the arteries near the fracture pour out a gelatinous matter, in which the vessels expand and multiply, till they form, between the broken ends, a well organized and animated mass, ready to begin anew the formation of bone by secretion; in the same way as the various parts of the living system secrete from the circulating fluids, the materials for their own growth and preservation. For some time, though the young bone has the proper organization, it is soft, delicate, and unconfirmed. The vessels are more numerous in callus than in old bone; and hence a broken or bent callus unites more readily than a fractured bone.

CALOMEL. A preparation of mercury; and one of the very best products of that remarkable and useful mineral. It is a compound of the black oxide of mercury with muriatic acid, the acid being in less quantity than is sufficient to neutralize the base; or according to the more modern view, it is a chloride of mercury. It may be prepared in either of the two following ways: 1. By taking a quantity of corrosive sublimate and pure quicksilver, and triturating them together till the quicksilver is extinguished, then subliming. The white matter near the neck of the retort, and the red matter at its bottom are to be thrown away; and the rest to be again sublimed, and carefully washed, to free it from any portion of corrosive sublimate; which is easily effected, as the one is soluble in water, and the other not. 2. Calomel may also be prepared by precipitation, first preparing the nitrate of mercury, then dissolving muriate of soda, (common salt) in boiling water, and to this adding the nitrate of mercury. An exchange of component parts takes place, nitrate of soda remains in solution, and submuriate of mercury is precipitated. This is to be very carefully and repeatedly washed.

Calomel is one of the most useful mercurial preparations we have. It is principally used as a purgative; and there are few purgatives more convenient. It may be administered to patients of every age, and in a great variety of complaints. It is a medicine which, on account of its efficacy in a very small bulk, and having no nauseous taste, is excellently adapted for children. To infants from a few weeks to a year old, it may be given in doses of from half a grain to two grains, according to their age. Though it is thus so safe and manageable a purge, it is to be observed, that it is not to be rashly given nor obstinately persisted in; but we must never forget that it is a preparation of mercury; and as this active mineral, if not carefully administered, may prove a poison instead of a remedy, it ought to be alternated with some purgative of quite a different character; and given only occasionally, and at intervals. Suppose a child six months old to be afflicted with slimy stools, scanty in quantity, and costive; to have occasional vomiting, heat and restlessness; we might prescribe, for three nights successively, one grain of

calomel mixed with a little pounded sugar, and on the morning of the fourth day, a tea-spoonful of castor oil; if the complaint continues, the same plan may be repeated four or five days after. As mercury is apt to exert its peculiar action on the mouth, we must be careful not to order it in cases of thrush and ulceration of the mouth, to which children are subject. In disorders of the digestive organs in children, accompanied with wasting, pale colour, picking of the nose, and the symptoms commonly supposed to indicate worms, two grains of calomel, with five of rhubarb, given every day, or in some cases twice a-day, for five or six days at a time, and then intermitting for a week, contribute much to bring back a healthy state of the system. When the child is really troubled with worms, especially the long round worm, or the small white ones, three grains of calomel, with six or eight of jalap, form a good vermifuge; this may occasionally have a grain or two of scammony or aloes added to it. In croup, it was at one time thought to be a very efficient practice, to give calomel to the amount of five grains every hour, even till a hundred grains were taken in a day; but this practice does not seem to have kept its ground; as croup requires very active treatment for its inflammatory and spasmodic symptoms, and cannot wait for the mercurial action of calomel; nor does there seem any specific power in calomel against croup. In inflammation of the bowels, it has been recommended to give doses of calomel so large as twenty or thirty grains; but there seems no peculiar advantage in this plan; indeed many practitioners have doubts whether any effect whatever results from such doses. When we wish the purgative effects of calomel in an adult, the best way is to combine it with jalap, rhubarb, scammony, or the extract of colocynth: five grains of calomel to fifteen of jalap or rhubarb, or eight of scammony or aloes, (increasing the quantity of both ingredients if necessary) form a very valuable purge. In disorders of the stomach and bowels, accompanied with a deficiency of bile, small doses of calomel have an excellent effect; even two grains, in some cases, have power so to stimulate the extremity of the duct which conveys the bile into the intestines, as to bring on a plentiful discharge of bile, by which a salutary evacuation is produced. In what is called sick headach, a dose of calomel one day, followed up by a dose of Epsom salts or compound powder of jalap on the next, gives great relief. Calomel is frequently employed with the intention of introducing mercury into the system; and for this purpose, the dose is one grain, or two, taken night and morning; and it is administered very conveniently in form of a pill. To prevent its passing off by the bowels, as even in this small dose it is in some cases apt to do, it is proper to conjoin a small quantity of opium with each pill, as half a grain; taking care to obviate costiveness by the occasional use of suitable purgatives. It would be difficult to enumerate the great variety of diseases in which calomel is used; they may in part be understood, from the general purposes which we have mentioned it as fulfilling, viz. a purgative and a mercurial effect; but it appears possible to cause it also to act on the kidneys, by combining it with diuretics; hence, it is used in combination with squill, in some species of dropsy.

In the liver complaints of the East Indies, calomel is the sheet anchor of practitioners. Much of the good expected from calomel, or any other form of mercury, in this disease, will certainly be frustrated, if it be given in too early a stage of the malady, or when the inflammation is still of the active kind; as, from the stimulant effects of mercury, it will probably add to the violence of the inflammation, and hasten the process of suppuration. The activity of the inflammation must be subdued by bleeding, and the other parts of the antiphlogistic regimen; and if there remains a dull heavy pain, with enlargement and hardness o. the liver, and derangement of the digestive

powers, then is the proper time to commence the giving of calomel, in doses of one or two grains; not however trusting to its powers as if they were specific, but interposing other purgatives, and palliating febrile or other symptoms as they arise. Some of the Indian practitioners give calomel very early and in large doses, four or five grains every four hours, and as they say with great relief; not in proportion to the purgative effects produced, (for the evacuation of the bowels by other means has no such effect,) but in consequence of its procuring the discharge of great quantities of bile, and thus relieving the pain and distension of the liver.

CALORIC. A name invented by the French chemists, to express the cause or matter of heat, whatever it is; and to supply, in philosophical inquiries, a term different from the sensation excited in living beings, or the effects produced on inanimate substances. Thus we say *caloric* expands bodies, and imparts heat or warmth to our frame. *See* HEAT.

CALX, the Latin name for lime; and also a term in the older books of chemistry, for the state into which most metals are brought, by exposure to a strong heat and the free access of air. *See* LIME *and* CALCINATION.

CAMPHOR. A substance obtained by distillation from a species of laurel which grows in great abundance, and to a considerable size, in the forests of Japan; the *Laurus Camphora.* All the parts of the tree smell strongly of camphor; and to procure that substance, they are cut down into small pieces, and put into a still with a quantity of water. After the water has been kept boiling for forty-eight hours, the camphor is found adhering to the straw with which the head of the still is lined. In this state it is grey, and mixed with straw and other impurities. It is purified by a second sublimation in glass vessels. Pure camphor is lighter than water, white, unctuous to the feel, tough, and with difficulty reduced to powder. It has a bitter, aromatic, pungent taste, accompanied with a sense of coolness; its smell is strong, but agreeable; it is very volatile and inflammatory. It is soluble in alcohol and ether. It is found in so many different plants, that it is considered as one of the peculiar principles of vegetables.

Camphor is a substance of considerable activity when taken into the stomach. It increases the heat of the body; and tends to promote perspiration, without producing much effect on the pulse, except in large doses, when it softens it, and renders it fuller. There has been considerable diversity of opinion as to the effects of camphor; and this may be accounted for by reflecting, that some assertions refer to its effects in small doses, soon after its exhibition; while others refer to its subsequent effects, when given in larger doses. At first it stimulates, but afterwards there is depression. It has been used in various diseases of languor and oppression, as in fevers of the typhoid kind; in rheumatic fevers with much debility, in eruptive diseases, as small-pox and measles, when the rash has disappeared too suddenly. It has been used as an antispasmodic in convulsions, hysterics, and hiccup. Camphor is useful in peritonitis, (inflammation of the membrane investing the bowels,) whether it occurs in men, or in women in the child-bed state; the antiphlogistic practice, of course, being employed at the commencement of the disease. Persons who cannot procure sleep except from large doses of opium, will sometimes succeed by combining smaller doses with camphor. Camphor may be usefully added to various other medicines; to bark, in typhoid diseases; to valerian, musk, assafetida, &c. in spasmodic complaints; and to antimonials, and other diaphoretics. With regard to its dose, and the best way of exhibiting it, as a few drops of alcohol enable us to reduce it to powder, it may be given in the form of pills; from two to five grains of camphor being administered every four hours, till its effect is produced, viz. of allaying

irritation, rendering the pulse fuller and softer, and occasioning a gentle perspiration. In larger doses, as of twenty to thirty grains, it is apt to produce vomiting, giddiness, and other unpleasant effects. Camphor may be administered in the form of emulsion, made by rubbing camphor, sweet almonds, and sugar with water, till the camphor is suspended equally through the mixture. A scruple of camphor, with two drachms of sweet almonds, one drachm of sugar, and six ounces of peppermint water, forms an emulsion, of which one or two tablespoonfuls are to be taken every two or three hours. It may be given in powder mixed with sugar or magnesia; or the tincture may be used; half a drachm with an equal quantity of compound spirit of lavender, and added to an ounce of mucilage, is a proper quantity for a draught. Oil dissolves camphor, and thus furnishes the means of applying it externally, in cases of rheumatic pains, of indolent swellings, &c. Camphor is sometimes added to mercurial ointment, to increase its stimulant and deobstruent effects.

CANCER. The subject of this article is one of the highest importance, whether we consider the dreadful sufferings attending the disease, the interesting character of the sex who are the most frequent victims of it, or the variety of remedies which have been proposed and abandoned. This is a disorder which above all others has called forth the quackery of numerous impostors, who by their extravagant praise of various remedies, have deceived the hopes of the credulous and miserable. With unblushing impudence, empirics have published their success in what appeared the most hopeless circumstances; and race after race of hapless sufferers have found reason to deplore their bitter disappointment.

Cancer is of two kinds, the occult or scirrhous, and the open or ulcerated; but these may be more properly regarded as different stages of the same disease. By occult cancer or scirrhus, is meant a hard tumour, for the most part accompanied by sharp darting pains, which recur more or less frequently. This tumour, in course of time, breaks and ulcerates; and then is more strictly denominated cancer. The parts of the body subject to cancer are the following: The female breast and uterus, (*See* WOMB *and its* DISEASES) the lips, especially the lower one, the tongue, the skin, the tonsils, the lower opening of the stomach, and some other parts chiefly glandular. Chimney sweepers are subject to a cancerous affection of the scrotum. (*See* SCROTUM.)

Of these organs, it attacks most frequently the female breast; and, as in this part the disease has been the most accurately investigated, the remainder of this article shall be chiefly devoted to the description of cancer as it appears in that organ. In general, cancer begins at a small spot, and extends from thence in all directions. Its progress is more or less quick in different instances; and very able writers think, that when cancer has once begun, it may be checked, though it will not be removed, by the means which are employed to discuss other swellings. Others again believe, that in some cases they have succeeded in completely dispersing tumours, which had all the appearance of being cancerous. In general, it is too true, that scirrhus is seldom or never dispersed; and that it brings the neighbouring parts, whatever their nature may be, to put on the same diseased action; and thus the skin, the muscles, the cellular substance, are all involved in the same destructive process. In consequence of this morbid action, the skin above a cancerous tumour becomes attached to it, and the tumour is also attached to the muscles below. The tendency to this unhealthy action begins in the neighbouring parts, even before it can be distinctly seen; of which the melancholy proof is, that if the tumour be cut out, the disease will reappear in those neighbouring parts; and hence the necessary rule in operating, to take away a considerable portion of the surrounding substance. As the swelling

increases, it becomes knotty and unequal on its surface, and this inequality has been considered as characteristic of the disease; almost in every case, a darting pain is experienced. The hard swelling which is likely to terminate in cancer, is attended generally by the following assemblage of symptoms: The skin is puckered and of a dull livid colour, the part is knotted and uneven, occasional darting pains shoot through it; it is attached to the skin above, or to the muscles beneath; and in some cases, there is a peculiar unhealthy look about the patient. When the swelling is moved, the whole breast moves along with it. The structure of the swelling is different in the various stages of the disease. In the first stage, the following appearances present themselves: The centre is more compact, harder, and of a more uniform texture than the rest of the tumour, and appears almost like gristle. From this centre, narrow white ligamentous bands stretch out like rays in every direction. In the spaces between those bands, the substance is different, and becomes less compact towards the outer edge. When the disease is further advanced, the whole of the diseased part has a more uniform structure, there is no conspicuous central point; the external edge is more defined, and distinct from the surrounding gland, and the ligamentous bands in different directions are very apparent. When the tumour has advanced to that state corresponding to suppuration in other sores, its appearance is then totally different from that formerly described. In the centre is a small irregular cavity, filled with a bloody fluid, and the edges of this cavity are ulcerated, jagged and spongy; beyond these, there is a radiated appearance of ligamentous bands, diverging towards the circumference; but the tumour near the circumference is more compact, and is made up of distinct portions, each of which has a centre, surrounded by ligamentous bands.

It is not easy to say, what peculiarity of constitution is most subject to cancer; nor why, in some women, a slight blow on the breast should give rise to that fatal hardness which is to degenerate into cancer, while in others, an injury much greater shall produce no bad effects. In many cases, no preceding local injury can be traced as the cause of cancer; but the patient is affected with an irregularity or disappearance of the monthly discharge; and cancer frequently appears at that time of life when the monthly discharge ceases. Cancer, however, is not confined to any period of life; and even children have suffered from it. It has also occurred in the breasts of men.

There is a disease resembling cancer, which attacks different parts of a glandular structure; as, for instance, the lips and the sides of the nose. It is an eating sore which is uniformly progressive; but it differs from cancer in not contaminating the neighbouring parts, nor affecting the absorbent glands and skin at a distance from it. Unlike cancer, it in various instances admits of a cure, by several modes of treatment.

CANCER *in the state of ulceration.* The diseased skin covering a cancerous tumour, generally ulcerates before the tumour is very large; a considerable opening ensues, and a discharge of a sharp ichorous matter takes place, with great rapidity. Sometimes it appears as if this diseased action were disposed to stop, and there is a growth of flesh, which in some cases is even cicatrized; but though there may be occasionally a little mitigation, and the disease may for a time appear stationary, yet it never altogether ceases; nor do the parts show any tendency to put on a healthy action. In the mean time, the absorbent vessels take up the poisonous matter, and convey it to their glands. These become affected in the same manner as the original sore; and if the patient were not to be cut off, we should see in various parts of the body, numerous centres of malignant disease. The pain and irritation are now extreme, the sufferings wearing out and distressing; chains of glands are hard, painful,

and lancinating; and by their swelling, they obstruct the passage of the fluids through them, and cause the limb to become dropsical. A leaden lividness appears in the countenance, the sleep is impaired, emaciation follows, and the long-continued suffering impresses on the face the living picture of anguish and despair. Towards the end of the disease, there is often a cough and difficulty of breathing. The edges of a cancerous ulcer are hard, ragged, and unequal; very painful, turned in various directions, sometimes upwards, and at other times towards the sore itself. The surface of the sore is uneven, sometimes there are risings, sometimes there are deep hollows. The discharge is commonly thin, dark-coloured, and ill-smelled, and so acrimonious as even to corrode the neighbouring parts. Sometimes, from the sheath of the blood-vessels and their coats being corroded, a great deal of blood is lost. The darting pains which were present at the beginning of the disease are now still more distressing; and one of the most painful symptoms is the burning heat felt all over the ulcerated part.

Treatment. A disease accompanied with such lamentable circumstances, occurring so frequently in the female sex, and so frequently baffling all attempts for its cure, has necessarily called forth many anxious inquiries into its nature, and the best method of treating it. Of the morbid action which takes place in cancerous swellings and ulcers, there seems to be nothing satisfactory known. It is a subject of considerable interest, whether cancer is an affection of the constitution, or if it is merely local; as on the decision of this question, will depend the propriety of performing an operation or not. If by cutting out one tumour, we merely remove one diseased portion, and if the malady is probably only to show itself with greater fierceness in another part, then we should certainly spare our patients the terror of the knife; but if the constitution be upon the whole sound, we ought surely to remove any tumour, which we have reason to think would, in a little time, put on the horrid symptoms of so destructive a disease. It would be a long and a heartless task, to enumerate all the schemes, proposals, and remedies that have been suggested for cancer: the endless list is itself a proof, that nothing has yet been discovered that is entitled to our confidence. Supposing a woman with a hard swelling of the breast, to apply to a surgeon for advice, his opinion will depend on the preceding cause of the swelling, whether it was in consequence of a blow, whether from the suppression of milk, or from cold; whether it has continued long; whether it is knotty and unequal; whether the skin is puckered; whether there are acute and darting pains shooting through it. It is a safe practice, to apply to all tumours on the breast, a number of leeches, and to procure a free discharge of blood by means of them; to rub the tumour with warm oil, either simple or camphorated, or with iodine ointment; to keep the bowels open, and to attend to the general health. These means should be persevered in for some time, and we shall find some tumours at first very unpromising, disappear at last under this treatment. If we find, after continuing our trial a reasonable time, of which the attending practitioner in every individual case must judge, that no progress towards amendment is made, but that there is every reason to fear, that a scirrhous tumour and open cancer will ultimately be the result, there is no resource left, but to submit to the removal of the part, before the latent mischief has spread, and become irrepressible. As to the method of removing the tumour, two have been proposed, either by the knife or by caustic. The operation by caustic, though it may be agreeable to the timidity and prejudices of some, is in reality a far more formidable way of removing the tumour, than the knife is. The pain is indeed much greater; and the probability is, that it will excite an inflammatory action, which will quickly bring the tumour into the state of ulceration. It often requires repetition, and the great length of time neces-

sary in some cases, for the separation of the dead parts, renders it very tedious. Mr. Pott describes, with great indignation, another bad effect from the attempt at removing by caustic, viz. the plausible pretences it gives to quacks for saying, that they have removed the cancer by their applications. He says, that "the ragged appearance which the bottom and sides of the parts make, after having been removed by the application of caustic, is so unlike to the smoothness of that which has been removed by incision, that ignorant people are easily induced to believe, what the designing always tell them, viz. that the medicine has taken their disease out by the roots, and that the ragged parts which they see, are such roots. When nurses and quacks talk of the fibrous roots of a cancer, and of cancerous fermentations, they are excusable, the one from their ignorance, the other from the nature of their trade; but when they who pretend to some kind of medical knowledge use this kind of language, it is shameful." If we have decided to remove a cancerous tumour, the knife is, of all means, the simplest, the safest, and the best; and though we cannot always secure the patient against a return of the complaint, yet if the operation be timely performed, there is reason to hope, that except in very bad constitutions indeed, the patient may get rid of this very deplorable malady. When it does recur, it is too often in consequence of some of the diseased parts having been left behind, or the too long delay of the operation. Some deny altogether the existence of any constitution which may be termed cancerous; yet it certainly does happen, that the disease recurs in cases where we have every reason to believe, that the injured parts have been freely and completely removed. When cancer affects any other part than the breast, its removal must be attempted by the methods proper for operating on that part.

Though little good is to be done by any external application, it may not be useless to mention shortly, what has been proposed, and to state what things ought *not* to be done. *Hemlock* has been a good deal employed, on the recommendation of Dr. Stoerk, of Vienna. He had great confidence in it, but other practitioners have not found it to give even a temporary relief. It may do some little good as a narcotic, in allaying pain, and procuring a slight suspension of the irritation; but as to any power it has of an ultimate cure, it is utterly worthless. The way of using it has been, to begin with a small dose, and gradually to increase it, till giddiness is produced. Two grains of the extract, now called the inspissated juice, or three grains of the powder taken twice a-day, is the dose to begin with; and at last, some patients have been able to take an ounce of the extract daily, but with no good effect. *Belladonna*, or the deadly nightshade, has also been used with equally bad success. The dose at first is a grain of the dried leaves night and morning. *Hyoscyamus*, or henbane, beginning with two grains of the extract, is another remedy, but equally inefficacious. *Digitalis*, or fox-glove, by diminishing vascular action, has some slight effect, merely as bleeding or spare diet has; but has no peculiar power at all over cancer. *Opium*, in this irritating complaint, is frequently used to allay pain; though no more capable than any thing else, of effecting a cure. All the articles just mentioned are of a narcotic quality, and it is probably from their giving some slight alleviation, that remedies of this class have obtained any notice in this intractable disease. *Mercury*, so efficacious in a great variety of diseases, has also been tried in cancer; but so far from doing good, it is sure to aggravate the symptoms, especially in the ulcerated state. *Arsenic* was at one time thought to have great and specific powers in cancer; and many practitioners yet have hopes, that if a remedy is to be found, it is to be in some preparation of this mineral. The mode of administering this dangerous substance will be found under ARSENIC; and the precautions necessary even in its application in

the form of plasters, &c. *Iron*, in various forms, has been used and much extolled by Mr. Carmichael of Dublin, for the cure of cancer. He has made much use of the carbonate of iron, what is well known by the name of rust, in the quantity of thirty grains in the course of a day, in divided doses. He has also used the tartrate and phosphate of iron. In many constitutions, the preparations of iron are apt to bring on costiveness, with headach and affection of the breathing: these symptoms are to be obviated by the exhibition of aloes or other purgatives, by withdrawing the iron, and by giving camphor or other antispasmodics. But iron has shared the fate of other anti-cancerous medicines, and has not supported its claims to confidence. Some good has apparently been done, by keeping cancerous patients on a very spare diet, or on one consisting principally of milk. Cancerous ulcers have been dressed with a great variety of applications, principally of the narcotic kind; and some of these have abated the pain, and corrected the bad smell; but the carrot poultice has been found as efficacious as any other. A weak solution of the chlorate of soda has been found a useful wash.

It is now time to bring this long and unsatisfactory article to a close, by repeating, that for true cancer, no remedy whatever has yet been found but extirpation; and that in every case, the earlier this is done, the better. It is improper to waste time by the fruitless exhibition of a variety of remedies, which former experience has shown to be quite unworthy of confidence. In the early stages, bleeding by leeches, and even in some constitutions, a general bleeding or two, and a low diet may be tried; and a prudent attempt may for a little be made by arsenic, hemlock, and iron; but these should not be long persisted in, as the disease may in the mean time be insidiously extending itself, and rendering even the operation unlikely to effect a cure. When the operation is resolved upon, let it be done effectually, and with the knife; let no timidity prefer the apparently milder but really more cruel means by caustic; which, without removing the disease, will only aggravate it, and rouse into action that mischief which would perhaps have long been latent.

Finally and especially, let the unhappy patients and their friends be on their guard against the false pretences of interested quacks, who, without the slightest portion of medical skill, promise a safe and speedy cure of cancer; who, though scarcely able to read or write, boast of having succeeded where learning and skill have failed; and who, pretending to be in possession of a secret by which the acutest sufferings of humanity can be alleviated, mysteriously conceal their nostrums from the candid practitioner, and deal only with hopeless misery, credulity, and ignorance.

CANELLA. The bark of a tall tree, *Canella alba*, common in Jamaica, and other West Indian Islands. Canella is the inner bark dried in the shade, after being freed from the outer rind, which is thin and rough. It is a pungent aromatic, and is sometimes employed where a warm stimulant to the stomach is necessary. The dose of the powder is from ten grains to twenty.

CANINE MADNESS. *See* HYDROPHOBIA.

CANINE TEETH. The two eye teeth, or those on each side of the four cutting or front teeth, in both jaws; so called from their resemblance to the teeth of the dog. Children have sometimes great pain in getting the eye teeth, and require to have the gums scarified, and the various symptoms of irritation and disease attended to.

CANTHARIDES. SPANISH FLIES. *Melöe vesicatoria*. They are an insect of the beetle kind, of a shining gold and greenish colour, and a strong and sickly smell. When tasted, they make no impression on the tongue at first, but very soon a degree of acrimony and a flavour of pitch is perceived. The largest and the best are brought from Italy. They should

be chosen of a fresh colour, entire, and free from dust. The principal use of these insects is to form blistering plaster, which they do with great efficacy and success. Under the article BLISTER, we have given a full account of the cases in which blisters are proper, and also how they are to be managed. Cantharides are also used internally, and are of great power on the urinary organs. Hence they have been used for the cure of incontinence of urine, or for its suppression; they have also been used in gleets, and for the cure of the whites; but their internal use requires great caution, and most of the maladies for which they are used may be alleviated by safer means. The dose to begin with is half a grain of the powder, or from fifteen to thirty drops of the tincture. This may be continued for a day or two; but it is apt to have severe effects on the urinary organs, and must be withdrawn as soon as the patient complains of pain in making water. The acrimony of the cantharides, when absorbed into the system from a blister being put on, is to be obviated by drinking largely of diluents, as gruel, barley water, and the like. It is said, that boiling cantharides in water deprives them of the power of acting on the kidneys, without in the least diminishing their blistering properties. The symptoms of an over-dose of cantharides are violent retching, with copious stools, frequently bloody; severe colics, and inflammation of the stomach and intestines; sometimes convulsions, with a horror of liquids, as in hydrophobia; and delirium. Besides these, there are the peculiar effects on the urinary and genital organs, as heat in the bladder, frequent discharges of bloody urine, strangury, &c. The treatment must be by copious bleedings, the warm bath, fomentations, mucilaginous drinks, and opium in the form of clyster.

CAPERS. The unexpanded flowers or buds of a plant, *Capparis spinosa*, growing in Italy, Spain, and the south of France; which are in much use at the table, when pickled with vinegar and salt. Like other vegetables, they are possessed of anti-scorbutic virtues.

CAPILLAIRE. A syrup made of *Maiden Hair*, a genus of fern, of which there is only one species belonging to Great Britain, the *Adiantum capillus Veneris*, or true maiden hair; which is found rarely in Scotland and Wales, on rocks and moist walls, and which is a native of the south of Europe and the Levant. This is a very succulent plant, yielding almost its whole weight of juice; but neither its taste nor smell promises any efficacy. If the syrup of capillaire which is made from it, be good for any thing, it is from the orange flower water that is put into it. The Canadian maiden hair, the *Adiantum pedatum*, is the best.

The subject of this article belongs rather to cookery than to medicine; but as many persons think it a useful, as it is certainly a pleasant demulcent to be taken during a cold, we insert a receipt for making it, from a late high authority. "Put one ounce of the North American maiden hair into a small quantity of boiling water, to infuse like tea; add a pound of sugar to the infusion; clarify it with the white of an egg, and boil it to a thick syrup; strain it through a cloth, and when cold, put in a little orange flower water, and bottle it. That which is commonly sold as capillaire in England, is simply syrup flavoured with orange flower water." (MRS. DALGAIRNS's *Cookery*.)

CAPSICUM. *See* CAYENNE PEPPER.

CARAWAY, *Carum carui*. A plant cultivated in gardens, the seeds of which have an aromatic smell, and a warm pungent taste. They are employed as a stomachic and carminative; and they assist in forming certain tinctures. Covered with sugar, they are used as a sweetmeat. Caraway seeds are used in dyspeptic complaints, in flatulence, and in hysterical and hypochondriacal cases.

CARBON. A simple inflammable substance, deriving its name from the Latin word *carbo*, a coal, as carbon is commonly obtained by burning wood till it puts on the appearance of coal. Carbon is a

substance of great importance in chemistry. It is one of those substances that have never been decomposed, and which are therefore, in the present state of chemical science, considered as simple. Carbon is black, insipid, and free from smell; it is brittle, and easily reduced to powder, and is insoluble in water. Charcoal retards the putrefaction of animal substances. Hence it is used in some diseases of a putrid tendency, and also as a tooth-powder. The experiments of modern chemistry have ascertained that the most valuable of precious stones, viz. the diamond, is pure carbon, differing from charcoal merely in the state of aggregation of its particles. Precisely the same product is obtained both from the diamond and from charcoal, when they are burned in oxygen gas; and this product is carbonic acid. Carbon enters largely into the composition of the animal and vegetable kingdoms, and by itself or its products is very widely diffused through nature. In its simple state, it is but little employed in medicine.

CARBONATES are those substances, into the composition of which the carbonic acid enters. They form a numerous class; as all the alkalis, and most of the earths and metallic oxides are united with carbonic acid, and form compounds of importance in medicine. Thus we have the carbonates of potash, of magnesia, soda, and ammonia; of iron, of zinc, &c. The properties of these several bodies will be found under the article with which the carbonic acid combines. *See* POTASH, SODA, &c.

CARBONIC ACID. When charcoal is burned in oxygen gas, provided the materials are in due proportions, the oxygen gas disappears, and in its stead we obtain a gas equally colourless and transparent, but possessed of very different properties. The new formed gas extinguishes flame, and is fatal to men and animals who breathe it. It is this gas which arises when charcoal is burned in small ill-ventilated rooms, and which so often causes the death of persons who occupy them, and which also occasions fatal accidents in breweries, and other places where fermentation goes on; being extricated in great profusion during the process of the fermentation of vegetable juices. It also taints the air of mines; and is called by the miners the choak-damp. When a person is exposed to breathe this acid, the first sensation is a slight sense of weakness, and a degree of giddiness, with a glow in the face and neck. Shortly after, he falls down, becomes insensible, and breathes loud as in apoplexy. Unless relief be obtained, death very quickly ensues. There is usually foaming at the mouth, with great suffusion of blood over the face and neck, and other marks of accumulation of blood in the vessels of the brain. If discovered in time, the person must be brought to the open air, and the chest compressed to expel the noxious air, which will not easily escape of itself, as it is heavier than common air. A quantity of blood must be drawn, and cold water applied to the head. Mustard poultices applied to the feet will assist in the relief of the patient.

Though carbonic acid applied to the lungs be thus deadly, it has very salutary and beneficial effects when taken into the stomach. The mineral waters commonly called acidulous, and which sparkle when first drawn, or when poured from one glass to another, owe this property to the carbonic acid which they contain; and hence not only the natural sources of these waters are resorted to with great benefit in stomach complaints, but artificial imitations of them are in frequent use, under the name of soda water, aerated alkaline water, and the like. The waters sold under the name of soda water, really contain little or no soda, and are chiefly water impregnated with carbonic acid. It is carbonic acid that gives the briskness to malt liquors, to cider, and to champagne.

Carbonic acid is rapidly taken up by lime-water; and as there is always a small portion of carbonic acid in the air, lime-water cannot be kept pure, unless the atmospheric air be completely excluded. Hence a certain way of clearing confined

places from carbonic acid, by pouring large quantities of lime-water from one vessel into another, from a considerable height, and in a broken stream.

Carbonic acid is deserving of the most distinguished notice, as having been the first aeriform fluid that was correctly investigated as possessing properties different from common air; and as having led the way to the discovery of a variety of other kinds of gases, and to many of the most interesting facts of the modern chemistry. For this, the name of the philosophic BLACK will be for ever memorable in the history of chemical science.

CARBUNCLE. An abscess or collection of matter, of a peculiarly gangrenous-looking nature. The first symptoms are great heat and violent pain in some part of the body, on which there arises a pimple with great itching; under this, there is a circumscribed tumour, seeming to penetrate deep into the parts below. This tumour soon puts on a dark red, or purple colour. A little blister frequently appears on the top of the tumour, which being broken, a dark-looking matter is discharged, and a slough makes its appearance. Sometimes a little slough of a black colour is seen in the middle of the tumour. The progress of a carbuncle to the gangrenous state is generally rapid. The size of carbuncles is various; sometimes they are eight or ten inches in diameter. Considerable hardness and pain generally attend the disease. As it advances, several openings generally form in the tumour; and through these, a greenish, fetid, and irritating matter is discharged. Carbuncle most commonly occurs in constitutions that have been injured by luxurious living; and from this circumstance, and from its occurring not unfrequently in people advanced in life, carbuncle is too often to be considered as accompanied with great danger; and this danger is to be estimated by the size and situations of the swellings, whether there be few or many of them, and by considering the age of the patient, and the state of his constitution.

Treatment of CARBUNCLE. The tumour is to be treated with fomentations and emollient poultices, till there be a considerable degree of softness about it; and when this is the case, it should be very freely opened, to allow the matter and sloughs to escape. Two deep and free incisions, crossing each other, are to be made in the carbuncle from side to side of it; and it is astonishing to see how soon these extensive wounds heal. Extensive though they be, they are quite necessary; and nothing can be more injurious, or tend more to lengthen out the disease, and even to induce a fatal termination, than the insignificant openings which form of themselves; which only allow the thinner matter to escape, while the sloughs are confined within, and unhealthy actions are going on. Large poultices are to be continued for some time, and as the discharge is copious and filthy, they should be changed three or four times a-day. This treatment is to be continued till all the sloughs have separated, and till the sore below puts on a healing action. We are then to apply any mild dressing spread on lint. Attention is to be paid to general symptoms; we are to keep the bowels open by proper laxatives, to give antimonial medicines in order to keep the skin moist, and freely to use bark and wine to obviate gangrene and debility.

The carbuncles which we meet with in this country, though sometimes bad enough, and when occurring in unhealthy constitutions, of great danger, are yet mild when compared with the carbuncles that occur in warm climates. In the plague, one of the most characteristic symptoms is the appearance of carbuncles; but in such cases it is not probable that the mere circumstance of their appearing adds to the danger of the disease. Carbuncles are bad when they occur, as they sometimes do, in the course of putrid and typhoid fevers.

CARBURETTED HYDROGEN GAS. A gas composed of a mixture of carbon and hydrogen, obtained in various

ways, and on a large scale by the distillation of pit coal. When thus procured, it is generally for the purpose of being used for giving light instead of oil, as in the streets of cities, or in houses, manufactories, &c. This modern practice, though producing a light both economical and beautiful, is believed to be in some instances prejudicial to the health. Dr. Paris says, "If exercise be useful during the period of sanguification (he means when the process of digestion is nearly completed) pure air is no less so; and I shall take this opportunity of entering my protest against the introduction of gas into the interior of our houses. Carburetted hydrogen is a deadly poison; and even in a state of great dilution, it is capable of exerting a very baneful effect upon the nervous system. I have been consulted on several occasions for pains in the head, nausea, and distressing languor, which evidently had been produced by the persons inhaling the unburnt gas in the boxes of our theatres." There is probably a good deal of exaggeration in this statement: among the thousands who use gas for illuminating their shops and houses, very few indeed experience the smallest inconvenience; and the frequenters of theatres are exposed to so many other causes of headach, nausea, and languor, that their complaints hardly furnish grounds for so general a condemnation of the employment of gas.

CARDAMOM SEEDS, *Cardamomum minus*, are a pleasant, warm and pungent aromatic, and both their tincture and powder are much used to give additional flavour and virtue to other stimulants.

CARIES. *See* BONES.

CARMINATIVES. Medicines that assist in the extrication and expulsion of wind from the intestines. They are commonly of the aromatic or fetid kind. Some of those most in use are cardamom seeds, anise, and caraway seeds; and anise in powder, or distilled water, is of much service in the griping disorders of children, who often obtain great and speedy relief by the expulsion of wind, consequent on giving this medicine. A little powdered anise seed mixed with white sugar, and put into panado, is a good form of exhibiting this carminative to children; or a little anise water with simple syrup may be given. We sometimes wish to relieve the larger intestines from distention by wind; and for this purpose, injections may be used, made of infusion of senna, with a small portion of assafetida dissolved in it. In the distention so frequent in stomach complaints, a dose of the compound of tincture of cinnamon, or the tincture of cardamoms, or a little powdered ginger; or the aromatic powder, composed of a mixture of cardamom, cinnamon, and ginger, is of service. In hysterical complaints, a great deal of the disease is owing to wind in the stomach and intestines, and medicines which expel wind are of benefit in such cases. One of the most convenient, as acting likewise in the removal of costiveness, is the pill of aloes and assafetida; two pills every second or third night.

CARROT, *Daucus carota*. An esculent root, which contains a good deal of sugary matter, and is in consequence nutritive and slightly laxative; in some stomachs it is not very easily digested, on account of the fibrous matter which it contains. It should be well boiled, and eaten when young. Carrots when scraped and boiled to the consistence of a pulp, form a very useful poultice for corroding or putrid ulcers, and cancerous sores.

CARTILAGE, the anatomical name for *gristle*. It is a white elastic substance, commonly growing at the ends of articulated bones, for the purpose of facilitating the motions of those bones which enter into the formation of a joint. A great portion of the rings of the wind-pipe is formed of gristle, and the lower extremity of the division between the two nostrils is gristle.

CASCARILLA, *Croton cascarilla*, the name of a plant, growing in the Bahama Islands and Jamaica. The bark, which is the part used in medicine, is imported

either in curled pieces, or rolled up into short quills. This bark has an agreeable smell, with a bitterish taste, accompanied with a good deal of aromatic pungency. When taken internally, it produces a sense of heat, and excites the action of the stomach. It was formerly used in intermittent fever, but the Peruvian bark is so much more effectual, that it is now but little resorted to. Cascarilla is best taken in substance, in the dose of from twenty to thirty grains of the powder of the bark.

CASHEW NUT, *Anacardium occidentale.* The oil of the cashew nut is an active caustic, and is employed as such in the West Indies; but it is not used in this country.

CASSADA, *Jatropha Manihot.* A plant which grows in various warm countries. The plant is poisonous, but the poison consists in a volatile oil, which is easily separated by heat. Cassada bread is made by washing and scraping the roots clean, grating them into a tub, and squeezing out the juice by strong pressure through a hair bag; the thinner part is evaporated, and the remainder dried over the fire in a hot stone basin, and afterwards made into cakes. Cassada root yields also a starch called *tapioca*, which is much used as a diet for weak and sick persons.

CASSIA, *Cassia fistula.* A tree which grows in India and Egypt, and is cultivated in Jamaica. The fruit is the part of the plant used; and this consists of a cylindrical pod, an inch in diameter, and a foot in length; and the pulp contained in the pods is obtained by boiling them in water, and evaporating to a proper thickness. It has a sweet mucilaginous taste, and acts as an aperient; but when given alone, is apt to gripe, though this may be prevented by combining it with aromatics. The dose is from half an ounce to an ounce; but it is not much employed in this country.

CASTOR. A substance found in oval pouches situated near the anus of the beaver. In both sexes, near the anus, there are four tough membranous follicles, the two largest and undermost of which are connected and lie close to each other, and contain an oily fluid secretion, which is the substance known by the name of castor. The best kind of castor comes from Prussia, Russia, and Poland, but it is now rarely to be met with; an inferior kind is got from Canada, in pods which are usually flatter, smaller, and moister than the European; and whose contents are of a very miscellaneous nature. The matter is commonly of a yellow colour, resinous, with a faint nauseous smell. Castor has been much extolled as an antispasmodic, especially in uterine complaints; but it is not likely to be much employed now, both on account of its high price and uncertain quality, and because, even in its genuine state, much good is not to be expected from it. It may be given in powder, from ten to twenty grains, or in clysters to the extent of a drachm. It is also used in tincture, from a drachm to two drachms.

CASTOR OIL, has no relation whatever with the preceding article, but signifies the expressed oil of the *Ricinus communis*, or *Palma Christi*, a plant which grows in the East and West Indies, in Africa and the South of Europe. The name *Castor* oil is said to be an instance of verbal corruption in medical botany. This oil, from its supposed efficacy in curing and assuaging the unnatural heat of the body, and in soothing the passions, was called by the French Agnus Castus; whence the inhabitants of St. Kitts, in the West Indies, who were formerly blended with the French in that island, called it castor oil. (PARIS's *Pharmacologia.)* The capsules contain, under a thin, grey husk, a white oily kernel. The skin of the seeds is very acrid and purgative; and one or two of the seeds, swallowed whole, act violently as a purgative or emetic. The kernels, when strongly pressed, yield almost a fourth part of their weight of a pale fixed oil, of a slightly nauseous smell and taste. The seeds should always be bruis-

ed without any assistance from heat; this is called *cold-drawn* castor oil, and is always to be preferred. In the West Indies, the oil is sometimes separated by boiling the seeds in water, the covering being first taken off them; but oil procured in this way is deeper-coloured, more acrid, and more liable to become rancid. Castor oil is one of the most valuable aperients we possess; for it, in general, thoroughly evacuates the bowels with little irritation; and hence is peculiarly useful when we wish the system to be little excited, as in cases of inflammation, and those of a spasmodic tendency. It is exceedingly useful during pregnancy and the child-bed state. Castor oil may be safely given to very young children; a small tea-spoonful may be given to children even of a few days old; and the dose is to be increased according to the age of the patient, till, for an adult, we come to an ounce. The principal matter requiring attention is the way of exhibiting it. To many stomachs it is peculiarly disagreeable, especially in Scotland, where the inhabitants are not very fond of oily substances. To infants, it is best given alone; and by permitting them to suck a little immediately afterwards, they are scarcely sensible of the taste. Castor oil may be given swimming on water; a few drops of oil of peppermint may be added; and in cases where inflammatory symptoms do not forbid it, a little ardent spirits. Castor oil may also be given in the form of emulsion, rubbed together with mucilage or the yolk of egg, and having a little peppermint-water added. To make a uniform mixture, the oil should be first rubbed with the yolk of egg, and the peppermint-water gradually added. A way of giving castor oil that we have found very convenient is the following:— Take a little chicken-broth, and skimming off all the fat, add to it, when very hot, the dose of castor oil by minute portions, each portion being well diffused through the fluid before another is added; and when salt is put in, most stomachs will bear the mixture as easily as an article of food. With persons to whom the use of castor oil is peculiarly nauseous, we must be cautious of exhibiting it, in cases where the strong action of vomiting would be dangerous, as in ruptures, and in diseases where there is a tendency of blood to the head.

CATALEPSY. A species of palsy, in which the patient is unable to move his limbs, but when they are moved by another person, they remain in any position in which they are placed. The patient neither sees, hears, nor feels; he swallows greedily whatever is given him; the countenance becomes florid, the eyes are open, seemingly fixed on some object; at the close of the fit, he fetches a deep sigh, and then recovers. It is said to come on suddenly, being preceded only by some languor of body or mind; and to return by paroxysms. In the fit, strong vinegar, or aromatic vinegar, may be applied to the nose; the neck and back part of the head are to be rubbed with turpentine liniment. Mustard poultices are to be applied to the feet, and an assafetida mixture given. The cure is to be attempted on the principle laid down under APOPLEXY; by purgatives, by bloodletting, or by stimulants, according to circumstances. If the disease arises from mental causes, a change of scene and proper management of the mind must go along with other remedies.

CATAPLASMS are external applications of a pulpy consistence, and somewhat tenacious. They are of various kinds; either stimulant, as when made with equal parts of common mustard and crumb of bread, moistened with vinegar; or when common salt is applied externally with bread or meal: or antiseptic, and applied with a view to correct putrescency, as the yeast poultice, or the carrot poultice. Anodyne cataplasms made with hemlock, henbane, or foxglove, are applied to scrofulous or cancerous sores, to allay irritation and pain. Refrigerant cataplasms are made by moistening crumb of bread with a solution of sugar of lead. Emollient cataplasms are

most commonly known by the name of poultices. *See* POULTICES.

CATARACT, *See* EYE AND ITS DISEASES.

CATARRH. The disease commonly called a *Cold*, of which the following are the ordinary symptoms: The patient is seized with a coldness and shivering; and shortly after, there is a degree of difficulty in breathing through the nose, and a sensation as if something were stopping that passage; a symptom well known under the term of a stuffing of the nose or head. There is a dull pain and heaviness in the forehead, and the motion of the eyes is stiff and obstructed. There soon takes place from the nose, a plentiful discharge of thin watery matter, so sharp as to inflame and excoriate the skin of the nose and lips, as with a chemical acrid. There is a sense of weariness over the whole body; and the patient is unusually sensible to the coldness of the air; and the pulse, especially towards evening, is more frequent than ordinary. These symptoms are very soon accompanied with hoarseness, and a sense of roughness and soreness in the course of the wind-pipe, with a difficulty of breathing, and tightness across the chest; and a cough, seemingly occasioned by something tickling or irritating the upper part of the wind-pipe. The cough is at first dry, and causes a good deal of pain in the chest, and about the head; and at times, there are other pains resembling rheumatism, in various parts of the body. Gradually, the cough becomes looser; that is to say, is accompanied by the discharge of mucus, which is brought up with more ease. The discharge from the nose becomes more mild, and also thicker; the pain of the head diminishes, but there is still a disagreeable sense of fulness about the nose, with a degree of deafness, ringing of the ears, and a wheezing sound when a full breath is drawn. There is also a bad taste in the mouth, with a foul tongue, although the appetite is good.

Such are the usual symptoms of the disease; and, though occurring very frequently, there are few diseases about which there is so much bad theory, and so much injurious practice. The fluid discharged from the nose has been thought to distil from the brain; and this opinion is evident in the name of the disease, which is derived from two Greek words, that signify to *flow down*. Nothing is so common as to find patients of every class treating themselves during catarrh by a hot and stimulating regimen. *To feed a cold* has passed into a popular medical axiom; and to accomplish this feeding, the patient is dosed with warm potions, abounding in spirituous liquors and heating spices; while nourishing meats are given as food. Some again, when they are seized with a cold, endeavour, as they say, to walk it off; and by taking violent exercise they exhaust their strength, already impaired by the disease, and add to the feverish symptoms which are present. But if we consider in what this disease consists, we shall see the impropriety of all such methods of proceeding. Catarrh consists in a certain degree of inflammation, excited in the fine membrane lining the inner parts of the nose, and continuous to that which lines the mouth, the fauces, the wind-pipe, and the air-cells of the lungs. Now, it is very plain, that an inflammation of these parts may be accompanied with much danger; and, consequently, that every thing tending to increase the inflammation already existing, must be carefully avoided. If a person is affected with catarrh, the best treatment is to take some mild laxative medicine, to drink plentifully of diluent liquors; (and none can be better than water gruel, or barley water); and to avoid changes of temperature by confining himself to his apartment. Few persons who have only a slight cold will submit to being kept in bed; yet nothing can be a safer or surer remedy.

CATARRH *in its severer form.* But colds are sometimes more severe, and require more active and decided treatment. If the pulse be full and strong, the breathing difficult, the cough dry, and causing much pain in the side; if the headach

is severe, with considerable flushing of the face, the cold is then approaching to another and more acute disease, viz. a pleurisy, and requires to be actively treated by blood-letting, and the antiphlogistic regimen. The patient must keep his bed; and should take some squill vinegar in a basin of gruel, sweetened with honey; if any tendency to perspiration comes on, it should be encouraged by the plentiful use of tepid drinks, as gruel or barley water; carefully avoiding to put any heating or stimulating liquors into them. Laxative medicines are to be given; and a blister applied to the breast or side, if there be any particular spot affected with pain. Expectorant mixtures are useful and necessary; and, till more scientific and formal ones can be procured, a very good domestic one may be made of vinegar and sugar-candy boiled together with water. A good expectorant is made, by mixing together an ounce of squill vinegar, four of cinnamon-water, or peppermint-water, two of mucilage of gum arabic, and one of simple syrup; of this, a table-spoonful is to be taken four or five times a-day. At an after period of the disease, when the inflammatory tendency is over, the cough and thick expectoration continues for a considerable time; and at night and morning, the cough is particularly troublesome. At this stage of the disease, opiates prudently given are of much service. Either laudanum may be given in the dose of twenty-five or thirty drops at bed-time, in any convenient vehicle; or paregoric elixir, which probably derived its name, which signifies *soothing*, from its relief in this very disease. It is to be remarked that the Scotch paregoric differs from the English in containing more opium; so that, to produce the same effects, we must prescribe nearly four times as much of the English as of the Scotch; a tea-spoonful of the Scotch in a glass of water is to be ordered at bed-time, or half a glass of the English with as much water. It may be proper to take some laxative medicine, to wear flannel next the skin, and some additional clothing; and to avoid exposure to a cold or damp air, especially in the evening. A person who has a cold, is unusually sensible to the impression of cold air; and if he exposes himself to it when the disease is seeming to abate, he will probably have it brought back with equal or increased severity. A degree of sore throat frequently attends catarrh, and this is peculiarly apt to be aggravated by any fresh exposure to cold. When a catarrh has been occasioned by a check to the perspiration by cold long applied, when it has been improperly treated, and when the patient has been exposed to fresh applications of cold, there is great danger of its passing into an inflammation of the lungs or their investing membrane, and so being attended with the greatest hazard to life.

We have now given, as we hope, a plain and intelligible account of catarrh in its mild and acute form; but we should leave this article very incomplete, if we did not suggest some other circumstances and precautions, highly proper to be remembered by the general reader. Some persons, from the slightness of the disease, and its frequent occurrence, are apt to treat it as a very insignificant matter, and to fear little from a common cold; but in the fickle and inclement weather of our island, neglected common colds too often put on an alarming appearance, and are the first of a train of ailments that conduct the sufferer to his grave. If a person finds himself, on every trifling exposure to cold, affected with cough, running at the nose, and other catarrhal symptoms, he must endeavour, by prudent precautions, by wearing flannel next the skin, and by avoiding exposure to currents of air, to prevent the frequent returns of the complaint, which will not always continue mild, but may lead to fatal pulmonary consumption. When the disease has come on, let him beware of treating it with hot and spiced drinks; let him refrain from speaking or reading aloud; and not attempt to walk it off, or drive it away by violent exertion.

A catarrh is not unfrequently attended with considerable danger, when it occurs in elderly people. It is not uncommon, in the decline of life, to have a great discharge of mucus from the lungs; and when the afflux of fluids to that part is aggravated by cold, it may give rise to a degree of inflammatory action; and this occurring in enfeebled constitutions, which are not able to bear depletion, by blood-letting, purging, or low diet, may prove fatal. Catarrh generally appears without any evidence that it is epidemic or contagious; but at times, there is a disease closely resembling catarrh, affecting vast multitudes at once, and commonly known by the name of *influenza*. *See* INFLUENZA.

CATECHU. An astringent substance obtained from the *Acacia Catechu*, and imported to us from Bengal and Bombay. It formerly used to be absurdly called Terra Japonica, Japan earth. There are two kinds, whose composition differs a little, but not so as to make any material alteration in their medicinal virtues. The extract is principally prepared from the internal part of the wood, by decoction, evaporation, and drying in the sun. It is a good astringent in fluxes and looseness; but we must be very sure of the propriety of its use before we give it in those complaints of the bowels, as no treatment can be more pernicious in the commencement of dysentery, than medicines to check the discharge. In relaxation of the uvula it is often effectual, either chewed, or the infusion of it used as a gargle; and it is said that public speakers and singers often resort to lozenges containing it, as an effectual preventive of hoarseness. In ulcerations of the mouth and gums, it is highly useful. The following are some of the forms in which it may be used. In diarrhœa, a powder may be taken, composed of fifteen grains of powdered extract of catechu, and twenty grains of compound powder of chalk, with opium. This is to be repeated three or four times a-day. There will be about half a grain of opium in each powder. Or an infusion of catechu may be made by taking three drachms, and infusing these in half a pound of water, and sweetening the strained liquor with honey or syrup. A table-spoonful of this is to be taken four or five times a-day. Or we may add half an ounce of the tincture of catechu, to five ounces of the chalk mixture, and give it in the same doses.

CATHARTICS. Medicines which cleanse or purify; applied more particularly to those which act upon the intestines, and more commonly known by the names of APERIENTS, LAXATIVES and PURGATIVES. *See* those articles.

CATHETER. An instrument which is introduced into the bladder in order to draw off the urine, when the natural powers are insufficient. It is a silver tube, with holes at the end to be introduced; and it varies in shape and curvature according to the sex of the patient. In general, a large instrument will enter the bladder more easily than a small one. Some catheters are made flexible, and some elastic. Sometimes there is a difficulty of passing the catheter, in consequence of spasm of the urethra and neck of the bladder. A dose of opium may be administered, and a second attempt made. If there is inflammation in the passage, bleeding may facilitate the introduction. One of the most important maxims is, never to force forward the instrument when it meets with any obstacle. When it is necessary to draw off the urine frequently, and the surgeon cannot attend often enough for this purpose, it is proper to leave a catheter in the bladder, till an attendant, or the patient himself, has learned to introduce the instrument.

CAUL. The membranous pouch which floats loosely over the surface of the intestines. It is called in anatomical language the *omentum*. It contains a considerable portion of fat, and furnishes a support for numerous bloodvessels, which supply those parts. A portion of it sometimes gets out of its place, and is found in the swelling occasioned by rupture.

CAULIFLOWER, *Brassica florida.* A species of cabbage, forming a very delicious article of food. Like other vegetables, it is apt to give rise to flatulencies in those whose digestive organs are not in a healthy state. It will in general require pepper or some other condiment.

CAUSE. The word *cause* is used in medical science in a variety of meanings, which are distinguished by an epithet prefixed. We have the *predisponent*, the *remote*, the *occasional* or *exciting*, and the *proximate* cause, of a disease. Thus, in gout, the predisponent cause is hereditary peculiarity of constitution; the remote cause is indolence and luxurious living; the occasional cause is a debauch or over fatigue, and the proximate cause is that morbid state of the body, whatever it is, which gives the sensation of pain and the other symptoms. We have no intention to defend the metaphysical accuracy of these expressions; but the explanations given above will assist in the reading of medical discussions.

CAUSTIC. A term applied to substances which destroy the texture of the skin, or any part of the body to which they are applied. Those principally in use are the stronger mineral acids, potassa, and the nitrate of silver, commonly called lunar caustic. They are used for destroying rising flesh, warts, &c. and for destroying a part of the sound skin for the purpose of forming an issue. *See* ISSUE.

CAUTERY. Any thing that destroys the texture of a part, as if by fire. Surgeons speak of the actual and potential cautery. The actual cautery is the application of burning bodies or heated metals; and the potential cautery is that which effects its purpose by caustics, such as those enumerated in the preceding article. The actual cautery was formerly much used in surgery; but in modern practice it is rarely employed, except in hæmorrhages from the mouth, which cannot be stopped by other means. There is reason to think, that heated metals might be advantageously employed more frequently than they are, especially in diseases of the bones; and the pain of their application is much less than we should expect.

CAYENNE PEPPER. An agreeable spice procured from the pods of the capsicum, or cockspur pepper, *the Capsicum annuum*, an annual plant, a native of South America, but cultivated in large quantities in the West India islands. Cayenne pepper is the mixture of the powder of the dried pods of many species of capsicum, and it is said to be frequently adulterated with coloured saw-dust and even red lead; and a large proportion of common salt is often added to it. Cayenne pepper is chiefly used as a seasoning with food. It prevents flatulence from vegetable food, and has a warm and good effect on the stomach. It is believed to possess all the virtues of the Oriental spices, without their tendency to produce complaints of the head. The use of Cayenne pepper in medicine was first begun by Dr. Adair, who found it of service in that state of the constitution of the slaves called *Cachexia Africana;* a bad habit of body in which they are predisposed to disease. From five to eight grains may be made into pills with crumb of bread, and given for a dose. Cayenne pepper furnishes a valuable gargle in certain cases of ulcerated sore throat. Twenty grains are to be infused in a pint of water, the infusion is to be strained, and an ounce of the tincture of myrrh is to be added; the gargle to be used frequently. Poultices of capsicum have been applied in the drowsiness and delirium common in the fevers of tropical climates. In ophthalmia from relaxation, the diluted infusion is a good remedy. The tincture of capsicum may be used in those cases where the remedy is judged proper; the dose is from ten to thirty drops; and two drachms of it, added to six ounces of infusion of roses, or of barley water, may be used as a gargle, diluting it if necessary.

CAVIARE. A food made of the hard roes of sturgeon, formed into cakes, and much esteemed in some of the northern countries of Europe.

CELERY, *Apium graveolens.* A plant whose leaves and stalks are used as a salad. Their digestibility is increased by their being steeped in vinegar.

CELLULAR MEMBRANE. The cellular tissue of the body, composed of plates and fibres variously conjoined, by which the different parts of the body are connected together. The cells over the whole body communicate with each other, and this is the reason that in dropsies, the water passes into the different parts of the body; if the patients are in the erect or sitting posture through the day, the feet and legs are swelled at night; and by the horizontal posture during the night, the swelling appears in the morning about the head and upper parts of the body. Hence also, when a wounded air-vessel in the lungs transmits air into the neighbouring cellular substance, that air passes to every part of the body, and produces, over the whole surface, an alarming swelling, accompanied with a crackling noise, when pressed upon. It is by means of the communication of the cellular membrane that butchers blow up their veal; and that some beggars produce upon themselves the appearance of enormous swellings, to excite compassion. The cellular membrane fills up the spaces between the different organs and textures of the body; it preserves them all in their proper situation, prevents them from unduly pressing upon each other, and from interfering with the motions or other functions they have to perform. It is in particular cells also that the fat is contained; and these are distinct from the cells that allow the communication of air and water.

CENTAURY. The name of a genus of plants, formerly thought to be of much service as tonics, astringents, and diuretics; but now fallen into disuse. The blue bottle, *Centaurea Cyanus;* the blessed thistle, *Centaurea benedicta*, and some others, are examples of this genus.

CEPHALIC SNUFF. Certain stimulant powders used as snuff in cases of obstinate headach, and in some diseases of the eye. The compound powder of asarabacca taken like snuff, to the extent of five or six grains at bed-time, will operate the next day, producing frequent sneezing, and likewise a copious discharge from the nose. During its operation, it is necessary to avoid exposure to cold.

CEPHALIC VEIN. A large vein which comes over the shoulder, and runs down the back part of the arm; by the opening of which the ancients thought that disorders of the head were relieved.

CERATE. A combination of fixed oil or animal fat with some other substances, used as an external application for ulcers, burns, wounds, &c. The most useful of these are, Turner's cerate, or the ceratum lapidis calaminaris of the Edinburgh Pharmacopœia, ceratu moxidi zinci, &c. Preparations of lead, of mercury, and other substances, are added to cerates, according to the different intentions of the practitioner.

CHALK. An abundant production of nature, the combination of the carbonic acid and lime. It forms vast tracts of England. Salisbury Plain and Marlborough Downs form a centre, whence the chalk emanates in a north-eastern direction through the counties of Buckingham, Bedford, and Cambridge, and terminates on the Norfolk coast. In an easterly direction it traverses Hampshire, Surrey, and Kent, terminating at Dover; another arm passing through Sussex, east south-east, forms the South Downs, and the lofty promontory of Beachy Head. (BRANDE.) Chalk is the principal component of oyster-shells, and enters into the composition of other animal substances.

Chalk is used in medicine to correct acidity in the stomach. For this purpose, it is prepared by careful pounding and washing. It may be taken in the dose of from twenty to thirty grains; but if there be costiveness along with the acidity, it will be better to abstain from its use, and to employ some other antacid, as magnesia. When the chalk meets with an acid in the stomach, the substance produced

generally renders the bowels slow, and for this reason chalk is used in looseness of the bowels. A preparation called the chalk mixture is kept in the shops; it is made by triturating together one ounce of prepared chalk, half an ounce of refined sugar, and two ounces of mucilage of gum arabic; gradually adding two pounds and a half of water, and a little cinnamon-water to disguise the disagreeable taste of the chalk. There is no great nicety required as to the dose; one or two pounds may be taken in the course of the day; and in severe cases a drachm of laudanum may be added to each pound of the mixture. Chalk is used in pharmacy for obtaining carbonic acid, and impregnating water with it. When diluted sulphuric acid is poured upon chalk, a great quantity of carbonic acid is disengaged, and by certain contrivances, the water is made to absorb several times its own bulk of it; it then becomes soda-water, aerated alkaline water, &c.

CHALKSTONES. Concretions which appear in joints long affected with gout. When they accumulate, they destroy the motion of the joint; and when large they sometimes burst through the skin, forming extensive and troublesome ulcers. Chalkstones do not form, until after the constitution is weakened and the fit irregular. Physicians long were of opinion, that these concretions were an evidence that some kind of morbid matter was the cause of gout; but this theory is now given up. They were also supposed to be similar to urinary calculi. Dr. Wollaston subjected them to chemical analysis, and found them composed of uric acid and soda.

CHALYBEATE, containing some preparation of steel or iron. Chalybeate medicines are used in various diseases of debility, in stomach complaints, in cases attended with non-appearance or suppression of the monthly discharge in women, in hysterics, and in debility produced by disease, or by excessive discharges of blood. Chalybeates are to be avoided when there is too great quickness of pulse, with too much firmness and rigidity of the solids. The general virtues of iron and its several preparations are, to take off flabbiness of the muscular fibre, to quicken the circulation, to promote the secretions, and to prevent too great discharges into the intestines. When iron takes effect on the body, the pulse is raised, the colour of the face becomes more florid and healthy, and the discharges by the skin, urine, and bowels, are increased. The stools are in this case commonly of a dark colour. Iron is sometimes used in the metallic state: it is in this state given in the centre of sweetmeats; iron filings are so used; but as no metal acts on the body till it be oxidated, it is better at once to give the oxides of it, than to take our chance of its being oxidated in the stomach. The carbonate of iron is a good and safe chalybeate; and may be given in doses of from five to ten grains, either alone or mixed with some aromatic powder; and this quantity is to be repeated twice or thrice a-day. This preparation of iron has of late been much recommended in cases of tic douloureux, and in cancer. The sulphate of iron, or green vitriol, is another form of giving chalybeates. Two grains may be given twice a-day, or a solution may be made of ten grains to a pound of water, and a table-spoonful taken twice or thrice a-day, adding some syrup and some cinnamon-water to disguise the harsh taste of the iron. The tincture of muriate of iron is also an excellent form of administering chalybeates. Ten drops of this tincture are to be given in cold water twice or thrice a-day. From the above preparations of iron, all its good effects may be expected, and it is therefore unnecessary to encumber the pharmacopœia or shops with more.

CHALYBEATE WATERS contain iron, in the form of sulphate, carbonate, or muriate. They have a harsh taste, like ink; and are resorted to for the same purposes, and employed in the same diseases, as the preparations of iron. The principal of them are Hartfell, near Moffat, Peterhead, Tunbridge, Brighton, Cheltenham, Bath, Lemington Priors, &c.

CHAMBERS OF THE EYE. Certain compartments of the eye, containing clear fluids. *See* EYE.

CHAMOMILE, *Anthemis nobilis.* A plant indigenous in the south of England, but cultivated in gardens for the purposes of medicine. The flowers are the part used. They have a strong aromatic smell, and a very bitter nauseous taste. They should be selected fresh, and when rubbed, should strongly exhale their peculiar smell. The large white flowers are generally preferred to the smaller kinds, which become brown in drying. Chamomile flowers have long been famous as an excellent aromatic bitter; the infusion of them is commonly known under the name of chamomile tea, and when taken pretty strong and warm, it either of itself is employed to empty the stomach, or is used as an auxiliary to other emetics. A cup full of chamomile tea when cold, taken in the morning before breakfast, is a good aromatic, and helps to restore the tone of the bowels. The powder of chamomile flowers was at one time employed in the cure of agues, but it is now disused. Chamomile flowers are often used externally as fomentations. The infused flowers are rolled up in a cloth or flannel, and thus retain the heat for a long time.

CHAMPAGNE WINES may be divided into two classes, the sweet and sparkling, and the dry and still. These differences arise partly from the mode of managing the fermentation and bottling of the wine, and partly from the circumstances of the growth and situation of the vines; the sunny side of a hill yielding fruit fit for the production of the sweet wine, and the opposite aspect affording grapes calculated for the manufacture of a strong but dry wine. The sparkling varieties of champagne, if not taken in excess, are the most speedily exhilarating of all wines; they soon produce an approach to intoxication, which is very transient, and generally harmless; but, indulged in to any excess, their effects are more than ordinarily pernicious; and they then stand unrivalled in the headach, nausea, sickness, and universal derangement of the system, which they create. In habits tending to the formation of uric acid, and in constitutions subject to red deposits in the urine, or to affections of a gouty character, champagne, even in moderation, is certainly more apt than other wines to create painful sensations in the region of the kidneys, and in the small joints of the hands and feet. It is well known to have brought on fits of gravel and of gout; yet there are some gouty persons who indulge in champagne with at least temporary impunity, though in all such cases prudence forbids its use. So many persons complain of violent headach, even after a single glass of good champagne, that it should be interdicted wherever there is a tendency to such affections, from whatever cause they may arise. Still, or non-effervescing champagne, is often a strong and very heating wine, very deceitful in these respects to the palate. When of superior quality, it has the singular aromatic flavour of champagne in an eminent degree; a flavour which also exists, but is covered by carbonic acid, in the sparkling wine. The latter should, therefore, not be drank till the active effervescence has subsided, by those who would relish this characteristic quality. The prevalent notion that a glass of champagne cannot be too quickly swallowed, is very erroneous, and shows great want of taste in respect to the peculiar excellence of this wine: to such persons, a glass of perry or of gooseberry wine is as acceptable as one of champagne: further, it is no bad test of the goodness of sparkling champagne to leave it exposed for some hours in a wine glass, when, if originally of the higher order, it will be found to have lost its carbonic acid, but entirely to retain its body and flavour.—(BRANDE'S *Manual of Pharmacy.*)

CHANCRE. A local disease generally arising from the concubitus impurus, presenting the following appearances: It begins with an itching in the part; this is gradually converted into pain; in some cases, the surface is excoriated, and after-

wards ulcerated; or a small abscess appears and turns into an ulcer. The parts are affected with a thickening, which terminates abruptly, and does not gradually lose itself, like some other swellings, in the surrounding parts. Its base is hard, and the edges a little prominent. In parts where the skin is somewhat thick, the chancre commonly makes its appearance in the form of a pimple, which forms a scab in consequence of evaporation. The first scab is generally rubbed off, after which a second, still larger, is produced. From chancres, the poisonous matter finds its way into the system, and infects it with many distressing symptoms. Chancres at first are mere local complaints; and in their treatment, our object is to heal the local injury, and if possible to prevent the morbid matter from getting into the constitution. The local treatment consists in applying caustic to the sore, dressing it with mercurial or red precipitate ointment, and keeping it free from any accumulation of matter. Mercury is to be introduced into the system by pills or by inunction; and when it begins to affect the mouth gently, the sore will probably be healed, and the constitution secured from any further danger. *See* SYPHILIS.

CHARPIE. Scraped linen or lint used for the dressing of sores. It is called *caddis* in Scotland.

CHARCOAL. *See* CARBON.

CHEESE. The curd of milk, pressed, salted, and dried, with a portion of butter remaining in it. The chief art of making cheese consists in separating as perfectly as possible the whey, as a very small proportion of moisture accelerates fermentation and putrefaction. Cheese made from the milk of sheep digests sooner than that from cows, but it is less nourishing; that from the milk of goats digests sooner than either, but is the least nourishing. Cheese, especially when new, is very indigestible, except to the stomachs of the strong and robust, and to those who are accustomed to strong exercise. It therefore does not seem a wise measure to increase the labour of the stomach, at the end of a copious dinner, by the addition of cheese. Indeed it is then generally used in small quantities, chiefly as a condiment; and it is very commonly old cheese, with abundance of insects, which are generated in it when old, that is used on such occasions. Its acrimony and stimulus may then assist digestion, or perhaps its putrid tendency may check the acid fermentation of other aliments. The toasting of cheese renders it still more indigestible, by increasing its toughness. The use of cheese is a popular remedy in looseness of the bowels, but an improper one.

CHELTENHAM WATER. A very celebrated purging water, found at Cheltenham, in Gloucestershire, where there is both a saline and chalybeate spring. According to Brande, the saline water of Cheltenham contains the sulphate of soda, of lime, and of magnesia, and muriate of soda. The sulphur spring contains the same salts; and besides, it contains carbonic acid, sulphuretted hydrogen, and oxide of iron. The chalybeate spring contains the same salts, with a larger proportion of the oxide of iron, also carbonic acid and carbonate of soda. The saline springs contain more salt than most mineral waters, and the greater part of them are of a purgative nature. The sensible effects produced by this water are generally, on first taking it, a degree of drowsiness, and sometimes headach. A moderate dose acts speedily and powerfully as a cathartic; without griping, or leaving behind it that faintness and languor which so often follows the more active purges. The quantity to be drank as a purge, is from one to three pints; but in general, from half a pint to a quart is a sufficient dose. Cheltenham water has been recommended in a variety of opposite diseases; and, as might be expected, has fallen into some degree of discredit where it has failed to do good. It appears to be useful in full habits, where there is a degree of swelling and congestion in the liver, where the secre-

tion of bile is inconsiderable, and where there is tendency to slowness of the bowels. It is of more use in sanguine constitutions than in the pallid and enfeebled. When there are merely the common symptoms of stomach complaints, with flatulency and acidity, and where there is no hardness of the liver, Cheltenham water is not very useful. In delicate pale habits, the purging plan is improper, and the chalybeate spring of Cheltenham is recommended. In those who have returned from the East or West Indies, whose biliary system is almost always deranged, the purgative plan is very beneficial, and is a good preparation for a more strengthening treatment; and in such patients, the daily exercise and habits of temperance they practise, or ought to practise, contribute essentially to their recovery. In cases of jaundice arising from some resistance to the free discharge of bile, with a sense of heat, distemper, and fulness, increased soon after eating, Cheltenham water is useful. It is also said to be useful in jaundice from gall-stones, but in such cases, it should be drank warm. In irritable and feverish habits, with thirst and general languor, arising from some local affection or disease of the bowels, the waters of Cheltenham are less beneficial. The season for drinking the Cheltenham waters is the summer months; and as they lose their effects by daily repetition, they must be alternated occasionally with other purgatives, as aloes, rhubarb, jalap, or calomel.

CHEMISTRY. The professors of this splendid and delightful science have been very hard to please with its definitions. No fewer than eight different attempts have been quoted from different authors by Mr. Brande in his History of Chemistry. We shall adopt the one given by Dr. Thomson, who on this subject has an unquestionable right to be heard: "The object of chemistry is to ascertain the ingredients of which bodies are composed, to examine the compounds formed by the combination of these ingredients, and to investigate the nature of the power which produces these combinations." (Thomson's *System of Chemistry*, 1820.)

If we consider the different parts of this definition, we shall be struck with the extent and importance of the science of chemistry. It endeavours to ascertain the ingredients of which bodies are composed; and as there is hardly a substance around us which nature presents in a simple state, it is evident that the boundless variety of plants and animals, minerals and elastic fluids, are all objects of chemical investigation.

In ancient times, all bodies were supposed to be derived from four elements, but the more exact analysis of modern times has ascertained, that there are many more undecompounded principles than four; and instead of elements, has fixed on the term of *simple bodies*, meaning by this, only to place them in that class of bodies which have not yet been reduced to any that are more simple. These ingredients or simple bodies combine to form more complex ones; and their various compounds found in nature, or formed by art, are applied to many purposes of life. Thus we are indebted to chemistry for many valuable medicines, for improvements in agriculture, in manufactures, in dying, and in bleaching; and to chemists we owe the illumination of our cities by gas, the speed and certainty of navigation by steam, and the security of the miner by the safety-lamp. The power by which these combinations are effected is of more difficult investigation; and after collecting and arranging the phenomena, we say that they are produced by *affinity*; a term which, like *gravitation* in natural philosophy, expresses the generalization of many facts, the cause of which we cannot trace.

The instruments which chemistry employs in her investigations are many and various. Heat is a most important one; light, electricity, and galvanism, produce many chemical changes; and to the skilful application of the latter power in the hands of Sir Humphrey Davy, are owing not only some of the most brilliant disco-

veries in chemistry, but also such views of the science, as threaten to shake the foundations of that theory, which seemed immoveably settled by the genius of Lavoisier.

We cannot here enter into the details of chemistry, for which we must refer to the treatises composed on the subject; nor can we trace the progress of discovery, from the first rude ages of ignorance and imposture, to the world of wonders which has burst upon our sight within the last fifty years, in consequence of the labours of Black and Priestley, Scheele, and Cavendish. To those who have opportunities to examine the History of Chemistry, it will afford a high interest to observe the genius and patience which its cultivators have exercised, and the gratifying results they have obtained; at once illustrating the wisdom of the Creator in the constitution of the material world, and his goodness in placing within the reach of human industry, so many materials for the comfort and embellishment of civilized life.

CHERRY, *Prunus Cerasus.* A stone fruit much eaten, and, like other summer fruits, cooling and laxative, but possessed also of the bad qualities of stone fruits when taken in excess or unripe; being difficult of digestion and apt to give rise to dysenteric symptoms.

CHERRY BRANDY. A fascinating *liqueur*, made by infusing the pulp and broken kernels of cherries in brandy, and sweetening the infusion with sugar. It partakes of the properties of ardent spirits, and when taken as a dram, has the additional danger of inducing its repetition by the pleasantness of its flavour.

CHESNUTS, from the *Castanea vulgaris*, are chiefly used as an article of dessert, but on some occasions they are eaten with food. They are to be avoided by dyspeptic patients. As the chesnut affords no oil by expression, it is more nearly allied to farinaceous vegetables than to nuts; it may even be made into bread, but is heavy and indigestible. Chesnuts, when eaten after dinner, should be roasted, and no stomach but the very strongest should venture upon them. They should not be allowed to children.

CHEST. The cavity which lies between the neck and the abdomen. It is bounded by the ribs and the intercostal muscles, the spine, and breast-bone; and below by the diaphragm; and contains within it many very important organs. The heart, with the great bloodvessels, both arteries and veins, is contained in it; as also the lungs, the thoracic duct, the eighth pair of nerves, and the intercostal nerve. The windpipe passes into the thorax, and the gullet proceeds through it to terminate in the stomach. The chest is lined by a fine membrane called the *pleura*, a doubling of which invests the lungs; and hence in the healthy state, the lungs move freely in the cavity of the chest. The variety and importance of the organs contained within the chest, render it liable to become the seat of many diseases. The varieties of asthma, cough, difficulty of breathing, consumption, &c. have their origin in some diseased action, structure, or secretion within the chest. Severe diseases also occur when the large bloodvessels are enlarged or ossified; and effusion, whether of blood, pus, or water, produces dangerous symptoms. *See* the following Article.

CHEST, Water in the. An accumulation of water in the chest, or, more accurately, between the investing membrane of the lungs, and the membrane lining the outside of the ribs. The symptoms produced by such accumulation are the following: Difficulty of breathing, especially when lying in the horizontal posture, or when going up a stair or other ascent, inability to lie on one side, namely, that opposite to where the water is accumulated, sudden startings from sleep, palpitations of the heart, irregularity of the pulse, pale countenance, scanty urine, and considerable debility. Patients labouring under water in the chest sometimes die very suddenly; but in other cases, a spitting of blood occurs for a few days before the fatal termination.

Causes. Water in the chest is often an attendant of general dropsy, but it not unfrequently appears as a disease by itself. The same causes which give rise to general dropsy, may occasion water in the chest. It may also follow various diseases of the lungs, of the heart, and great bloodvessels; it also affects persons who have been long confined to sedentary employments, requiring much stooping; and those who have been addicted to the use of spirits, or who have laboured under asthma. It sometimes presents alarming symptoms rather suddenly, no signs having previously occurred to denote its gathering.

Treatment. Water in the chest is a disease from which recovery is rare. We are to attempt the cure by active purges, proportioned to the strength of the patient; by medicines which increase the flow of urine, and occasionally by emetics. A medicine which has been thought peculiarly applicable in this disease, is the digitalis or fox-glove; and under that article we have laid down the precautions necessary in its use. Relief has also been attempted, by a surgical operation, to discharge the fluid; this will certainly, in many cases, give great temporary relief, but there will be every reason to fear that the water will again accumulate. The same operation is applicable to the removal of blood or matter from the chest. *See* PUNCTURING *the Chest.*

It may be proper to mention here, that an instrument has lately been invented in France, by which much important information is communicated respecting the contents of the chest. It is formed on the principle of sound being conveyed along wood; and the noise made in breathing, or by the striking of the heart and vessels on the sides of the chest, is conveyed along this wooden roller, called a *stethoscope*, or inspector of the chest. We cannot in a popular work attempt to give any account of the symptoms of disease explained by means of the stethoscope. It requires considerable practice and attention to that particular branch to be familiar with it; and, from its recent introduction into the medical art, dexterity in its use is as yet confined to a few practitioners. *See* STETHOSCOPE.

CHICKEN-POX. A disease of the eruptive kind, in various particulars resembling small-pox, and apt to be confounded with it. At present, there is a considerable difference of opinion among medical men, with respect to the nature and even the existence of chicken-pox as a distinct disease; some considering it as such, while others consider it only as a modification of small-pox, occasioned by the previous occurrence either of small-pox or of cow-pox. While the matter continues undecided, we shall describe it as a distinct disease, and mention some of the symptoms in which it differs from small-pox. Chicken-pox arises from a peculiar contagion, and attacks persons only once in their lives. It is preceded by chilliness, by sickness, or vomiting, headach, thirst, restlessness, and a quickened pulse. After these feverish symptoms, which are generally slight, pimples appear on different parts of the skin, in the form of small red eminences, not exactly circular; having a surface shining, and nearly flat, in the middle of which a small clear vesicle soon forms. On the second day, this is filled with a whitish lymph; on the third day, the fluid is straw-coloured; and on the fourth day, the vesicles which have not been broken begin to subside. Few of them remain entire on the fifth day; and on the sixth, small brown scabs appear in place of the vesicles. On the ninth and tenth days, they fall off, without leaving any pits. Chicken-pox is generally a disease of little or no danger; requiring only some mild laxative medicine with diluent drinks, avoiding exposure to cold, and attending to the diet, and to the bowels during recovery. If in any case the fever should be more severe, stronger purgatives may be necessary; and some medicine may be given to promote perspiration, and to diminish fe-

ver, as small doses of antimonials; with the spiritus Mindereri, or a little nitre added to the drink.

The principal marks of distinction between chicken-pox and small-pox are the following: The small-pox commences with a variety of severe symptoms of approaching fever, with vomiting, and even sometimes with convulsions; and at a period generally well defined, viz. the third day, the fever abates a little, and the eruption appears; but in the chicken-pox the fever is milder, and more uncertain in its duration: the pimples of chicken-pox are more quickly formed into vesicles or pustules than those of the small-pox are: the fluid in chicken-pox does not acquire the thick purulent consistence of that in small-pox: and in chicken-pox, the crusts or scabs are formed far earlier than in small-pox: *lastly*, in chicken-pox there is no secondary fever.

CHIGRES. A kind of sand flea, very troublesome in the West Indies. It most commonly insinuates itself into the soft parts of the fingers and toes, particularly under the nails, where it causes a disagreeable itching and heat. In process of time, a bag or bladder is formed, in which thousands of little eggs are deposited; and these become so many young chigres, which, if not speedily extracted, create running ulcers. Sometimes the limb, and even the life, has been lost, by neglecting to root them out in proper time. As soon, therefore, as any heat or itching is perceived in any part affected with a chigre, it will be advisable to extract it. This is done with a needle, and it is always proper to take out the cyst also, as troublesome ulcers are sometimes formed when it is broken. The cavity is then usually filled up with tobacco ashes or snuff; or the parts infected may be rubbed with the oil from the cashew nut, or with a decoction of tobacco, or solution of the sulphate of copper.

CHILBLAINS. A painful inflammatory swelling on the extreme parts of the body, as the fingers, toes, and heels, occasioned by cold. A very common way of getting chilblains, is by bringing the hands and feet near the fire in cold frosty weather. The colour of chilblains is a deep purple or leaden hue, the pain is pungent and shooting, and a very disagreeable itching attends. In some instances, the skin remains entire, in others it breaks, and a thin fluid is discharged. When the cold has been great or long continued, the parts affected are apt to mortify and slough off, leaving a foul ulcer behind. Whenever any part is affected with chilblains, it should be well rubbed with spirits of turpentine, spirit of wine, or tincture of camphor; and even when the skin is chopped, these stimulating embrocations are the best. When ulcers occur, the dressings should not be of a relaxing nature, but have some degree of stimulating power, such as the basilicon ointment, either alone or having a little turpentine mixed with it. A poultice may be required for a day or two at first, to get rid of the foul matter and sloughs.—Persons who are subject to chilblains should be careful to avoid cold and wet feet, and not to expose the feet suddenly to the heat of a fire when they are cold. It might probably be a good method of preventing chilblains, daily to immerse the feet in cold water, and rub them dry; or to rub them with snow when it can be procured. Chilblains more frequently occur in old and young persons, than those in the vigour of life.

CHILDBED FEVER. *See* PUERPERAL FEVER.

CHILDBED STATE. *See* PREGNANCY, ABORTION, FLOODING, LABOUR, DELIVERY, &c.

CHILDREN, DISEASES OF. The period of childhood is considered, by medical authors, to extend from the seventh to the fourteenth year. Though the feebleness of infancy is past, and children are better able to resist many external causes of disease, there are yet many maladies which assail them during those years; and which require much attention on the part of those who have the care of them. They are liable to inflammatory

attacks, and the various effects of cold, as fevers, water in the head, sore throat, croup, and swellings of the glands; to all the varieties of eruptive diseases, as measles, small-pox, scarlet fever; and to various bowel complaints, often arising from the indigestible substances they are so fond of eating; to colic, looseness, and worms. Children are also subject to nervous disorders, as palsy, epilepsy, St. Vitus's dance; and to various diseases proceeding from bad habit of body, as dropsies, rickets, and scrofula. The symptoms and treatment of these various maladies will be found under their respective names.

CHILDREN, MANAGEMENT OF. The period of childhood is of the greatest importance, as it is the time when habits are formed, that materially affect the comfort and usefulness of the individual in after life. Children, in civilized society, cannot be left to the care of nature, like the young of the lower animals; but must be directed and controlled in many things, by the prudence of those who are more experienced than themselves. The principal points demanding attention are the regulation of the diet, bowels, sleep, clothing, cleanliness, and exercise.

1. *Diet.* Between the period of weaning and the seventh year, the diet should consist very much of farinaceous food, and milk; with a moderate allowance of animal food once or twice a-week, always taking care that it be dressed in the most plain and simple way, with the rigid exclusion of all savoury sauces, or heating condiments; such as would either tempt them to eat too much, or be heating to the mouth and stomach; and that would raise a feverish excitement, or cause them to drink too much fluid. A soft boiled egg, rice or bread puddings, sago, panado, or arrow root, will form a pleasing variety in the diet of children. Oatmeal porridge has been the food of many a healthy and thriving child. They may be allowed to eat ripe fruit in moderate quantity; but the stone fruits are very apt to produce bad effects on the stomach. The drink should be plain water, good small beer, or whey. After the seventh year, when the exercise is more violent, and the rapid growth of the body requires copious nutriment, the allowance of animal food may be a little more liberal; but through the whole period of childhood, and indeed almost through life, great quantities of butter, pastry, smoked and stimulating food, should be avoided.

2. *Bowels.* To keep the bowels of children in a healthy and regular state, is a matter of the utmost consequence. They are too apt to neglect the calls of nature, not being aware of the great importance of regularity in this respect; and those who have the care of them, should very frequently inquire about them, and not suffer them to go beyond one day without a motion of the bowels. Female children particularly, should be very much attended to by their seniors. Costiveness is one great cause of ill health in females, and the acquirement of regular habits with respect to their bowels is to them exceedingly valuable. Laxative medicines should not be given, unless in case of actual sickness, or very evident threatening of it; and for children, it may be useful to give calomel and rhubarb, senna, or the compound powder of jalap. Children should be early taught habits of self-command in the taking of medicine, even although nauseous; and it would save them much trouble if they would learn to swallow pills, as very active medicines may thus be introduced into the system in a very easy way. The diarrhœa of children should not be neglected; it very often arises from cold caught by being too thinly clothed; or from some article of diet disagreeing with the stomach. An occasional laxity for a day or two at a time, is rather to be considered as salutary; but more than this is to be checked, as tending to debility. The safest medicine to check looseness of the bowels in children, is the chalk mixture; to which the tincture of kino may be added, in the proportion of three drachms to the pound of the mixture; or half a pint of the infusion of catechu to the same quan-

tity. Children are very subject to worms, and this is one reason why the use of fruit should be very sparingly allowed them. When we are very sure that worms are present, the child should take powders of jalap and aloes, of calomel and scammony, or other medicines which have been found useful in this disorder. But there are many children who are troubled with disordered bowels, and who exhibit many of the symptoms of having worms, when there are really none in the intestines; these symptoms are, a pale colour, bad breath, defective appetite, and bad digestion, with frequent picking of the nose; but, fortunately, a course of medicines, nearly the same as for worms, is proper for that assemblage of symptoms.

3. *Sleep.* Children generally take a great deal of rough and boisterous bodily exercise; and during their education, their minds too are pretty much employed; all which occasions considerable exhaustion, so that it seems quite proper to allow them a due share of sleep, from eight to nine or ten hours at least. But it should be at sleeping time; and they should not be allowed to dose and saunter during their waking hours.

4. *Clothing.* Children should have their dress accommodated to the season; and a due degree of warmth should be kept up. It is wrong to expose them to cold in order to harden them; but a proper degree of exercise in the cold air should be taken. The great evils to be avoided are, cold accompanied with moisture, and any check to perspiration; which boys too often sustain, by throwing themselves down on the moist ground, when heated by their games. Flannel next the skin need not be ordered for healthy children; but where there is much tendency to catch cold, or to have loose bowels, or continual paleness of the skin, and weakness of the system, it will be prudent to make children wear flannel. Much care should be taken to have the feet always warm and dry; and to make them change their shoes as well as their clothes, whenever they get wet.

5. *Cleanliness.* Children should very early be taught the necessity and importance of cleanliness. They should be made to keep their hair, their teeth and nails in good order, as it not only promotes their own health and comfort, but renders them agreeable to all around them. It is of the utmost consequence to keep the skin very clean, as this tends to prevent many of the cutaneous diseases which are so common with children, but which are so disgusting. Washing with cold water about the chest, will lessen the susceptibility to cold; and about the feet, will strengthen them, and render them less liable to chilblains. Sea-bathing and swimming in safe places, are excellent both for health and cleanliness. Cleanliness is not without a degree of moral influence, and has been very properly styled one of the minor virtues.

6. *Exercise.* Children when in tolerable health, and not of an indolent disposition, seldom require to be urged to take exercise; they are rather inclined to take it too much, and too violently, and need a little regulation and superintendence in this respect. The practice of gymnastics or dancing is a good exercise; and girls should use the skipping ropes. When out of doors, children should be allowed to choose their own amusements, and interfered with only when they are in danger of doing any thing unbecoming, or hurtful to themselves or their companions. Even girls should have ample scope in their play; time, and their own sense of propriety, will soon enough correct any tendency to improper romping; their health will be promoted, and their figure expand; and it is better to possess a sound constitution and an active frame, than to be celebrated for proficiency in drawing or music, before the age of twelve or thirteen.

Though a prudent direction ought certainly to pervade the whole management of children, yet it ought not to be carried too far; and it is not often observed that they who refine the most in education, are the most successful in attain-

ing their object; or that the subjects of rigid and unbending regularity, are the healthiest or the happiest children. The precise walk of just an hour and no more, on a line or circle from which they must not deviate, cannot convey the same health and exhilaration as the cheerful, free, and expatiating ramble which youth would choose for themselves.

We would take this opportunity of recommending to parents, not to hurry the education of their children, nor on that account to confine them too much in one posture, secluded from the open air, and deprived of the exercise which the salutary dictate of nature impels them to delight in. They should often be permitted to change their attitudes, and even sometimes to lie down on the rug or sofa. Awkward habits must be checked; and when there is any tendency to deformity, machinery may be requisite; but it should be simple and light, and always under the direction of a skilful and upright medical man, who has made the mechanism of the bones and joints of the human body an object of careful study.

CHINCOUGH. *See* HOOPING COUGH.

CHLORIDES are combinations of chlorine with alkalis, earths, or metals. The chloride of lime and the chloride of soda have been found to have the valuable property of arresting putrefaction, and destroying the bad smell both of living and of dead animal substances.

CHLORINE. The name of a gas, of a greenish colour. It is a supporter of combustion, that is, inflammable bodies burn in it. It has a pungent and suffocating smell; and the power of destroying all vegetable colours.

CHLOROSIS, or GREEN SICKNESS. A disease of females, generally connected with non-appearance or suppression of the monthly discharge. The most prominent symptoms of the disease are, heaviness, disinclination to motion or exertion, much fatigue from very little exercise, pains of the back and loins, disorders of the stomach and bowels, as flatulency, acidity, and costiveness; and in some cases an immoderate appetite for food, or a desire for chalk, cinders, and other disgusting and indigestible substances. As the disease advances, the face assumes a pale or yellowish colour, the body also is pale and flaccid, the feet and legs swell, there is rapid breathing on very slight exertion; the pulse is quick and small, and there is much despondency or changeableness of mind, great agitation on slight alarm, with the sensation of a ball in the throat and belly, and other symptoms of hysteria.

Treatment. The symptom which most impresses the mind of the patient and her female friends, is the non-appearance of the menstruai discharge; and to this their wishes and remedies are anxiously directed. This is a function over which we have no direct control. We have medicines which can act directly and powerfully on the stomach, and some on the kidneys; but we have none that acts directly on the uterus; and to accomplish the regularity which we desire in its functions, we must strengthen the constitution and improve the general health. This is to be done by the use of a nourishing but easily digested diet, by a moderate allowance of wine or porter, by regular exercise, in small measure at first, and gradually increased as the patient is able to bear it; by a residence in the country, by a prudent management of the mind, keeping it cheerful and serene, and not suffering the patient to have anxious forbodings about her own health. When the circumstances of the case admit of it, resorting to a watering-place should be recommended. With respect to means more strictly medicinal, tonic remedies are to be given. Of these, the bark and iron are the chief: a tea-spoonful of bark or three grains of quinine are to be taken every day; and ten drops of the tincture of muriate of iron in cold water; or one or two grains of the sulphate of iron made into a pill with crumb of bread, or ten grains of the carbonate of iron with a little aromatic powder. The bowels are to be most particularly attended to. It is the

opinion of many respectable and experienced physicians, that it is not the uterine system, but the alimentary canal that is in fault in chlorosis; and even if the uterus is the organ to be attended to, there is not a safer or better way of doing it, than by assiduous attention to the regular action of the bowels. It is almost universally found, that those young persons whose bowels are unusually slow, who from indolence and thoughtlessness pay no attention to their regular evacuation, are precisely those who are most troubled with irregularity of the monthly discharge, and all the train of symptoms of languor, indigestion, and impaired vigour of their system. It should therefore be an object of sedulous care and vigilance on the part of parents, and those with whom the early years of females are spent, to watch over the regularity of their habits in this respect; and to inculcate upon them, the necessity of never neglecting a circumstance so essentially conducive to their health in every period of their lives, but especially at that period, to them the most interesting. The purgatives most proper in chlorosis are those of the aloetic kind, which act more especially on the lower parts of the intestines, and which by sympathy may also be expected to act on the neighbouring organs. The pills of aloes with assafetida, are a good medicine in chlorosis, as they will tend to relieve the flatulence which accompanies it. Two pills every second night, interposing a brisk purge of jalap, or salts, or senna, once in eight or ten days, are a useful remedy. Remedies used in dropsy, as spirit of nitrous ether, cream of tartar, turpentine, and in some cases, mercury, are necessary in chlorosis. Warm bathing of the loins and lower extremities, and fomentations to the back and neighbouring regions, are useful auxiliaries. Electricity applied to the region of the uterus is sometimes of great use in exciting its action, and procuring the discharge.

These measures will require to be persisted in, perhaps for many months; and the sex should be cautious how they trust to the multiplied nostrums which are proposed for their relief. From delicacy, they are apt to take the advice of the ignorant and credulous of their own sex, and weary themselves in the fruitless employment of what will never at all answer the end proposed. In general, we may promise, that with care and patience, and the skilful exhibition of proper medicine, aided by nourishing diet, regimen of the mind, and exercise, the constitution will be strengthened, and the disease removed, and the fair sufferers restored to that alacrity and vigour which is proper to their age.

CHOKE DAMP. The name given by miners to the destructive gas, carbonic acid, which, being heavier than common air, remains at the bottom of mines and caverns.

CHOCOLATE is prepared by reducing the cocoa-nut to paste, with sugar, milk, or eggs; it is also frequently mixed with aromatics. Although chocolate abounds with nutritive matter, it contains an oil which is difficult of digestion. It is therefore improper to be used as a common beverage. Tea or coffee is to be preferred. The cocoa-nut mentioned above as yielding chocolate, is not the large kernal like a man's head, which is obtained from a species of palm-tree in tropical climates, but the fruit of the *Theobroma Cacao* of Linnæus. *See* COCOA-NUT TREE.

CHOLAGOGUES. Medicines which are supposed to produce an increased secretion and discharge of bile.

CHOLERA. In the first of the following articles we give an account of a disease which frequently appears in this country after unusually hot weather; and in the second of the new and formidable malady, which has of late been so fatal over a great portion of the globe.

CHOLERA MORBUS. *Symptoms.* The disease usually comes on with sickness, retching, distention, and flatulency of the stomach, griping pain of the bowels, with frequent discharges of bilious matter, both upwards and downwards. There is

also heat, thirst, quick breathing, and a frequent, but weak and fluttering pulse; and in very severe cases, cramps of the legs. When the disease is violent, there is great depression of strength, with cold clammy sweats, coldness of the extremities, and hiccup, terminated by death; and in many cases these fatal symptoms run their course in four and twenty hours. In more favourable cases, the symptoms pretty severe for a day or two, gradually abate, leaving the patient in a state of great debility.

Causes. The causes of this cholera seem to be, an over-action of the biliary system, occasioned by the heat of the weather or of the climate; and hence it most frequently occurs in very hot summers in this country, and more particularly when the colds of autumn succeed to a very long-continued tract of drought and heat. Indulgence in fruit or some article of difficult digestion, exposure to the night dews, or fatigue, are some of the exciting causes.

Diagnosis. We distinguish cholera morbus from dysentery, by its being an evacuation of bilious matter only, without any mixture of blood or mucus; and from looseness, by there being almost no feculent matter passed.

Prognosis. Our judgment of the event is to be regulated by the frequency and violence of the efforts of vomiting and purging, and by the degree of debility induced. The disorder will probably be fatal, when there occur constant cold sweats, short and hurried breathing, hiccup, and spasms or convulsions. When sleep comes on, when the vomiting abates, and the skin is gently moist, our hopes are better.

Treatment. In the beginning of the disease, it is almost in vain to give any medicine by the mouth, as it is instantly rejected by vomiting. It is better at first, to attempt to dilute the acrid bile by large draughts of mild liquids, as barley-water, linseed-tea, rice-water, thin gruel, or toast-water, taken in a tepid state. Much of them will be thrown up; but at the same time, there will be a great discharge of the acrid bile, and what passes downwards will be less irritating. Warm fomentations with cloths wrung out of the decoction of poppy heads, are to be applied to the pit of the stomach; and the same part may also be rubbed with the tincture of camphor, or with laudanum. The extremities are to be kept warm by bottles of hot water, by heated bricks, by warm flannels, or other proper means. When we have reason to think that by the drinks above mentioned, we have tolerably well cleansed the stomach, and that less acrid bile is transmitted through the bowels, we must endeavour to allay irritation by proper doses of opium, given in the shape and quantity least likely to be thrown up. A grain, or a grain and a half may be given in the form of a pill, and this repeated every second or third hour till the irritation ceases; or forty drops of the tincture may be given as often, with very little water, or perhaps better still, in a tea-spoonful of brandy or compound tincture of cinnamon. The saline draughts may also be given, for the purpose of checking the vomiting. These are made by dissolving twenty or thirty grains of carbonate of potash in an ounce of water, adding to them quickly an ounce of lemon juice, and drinking the whole while it is effervescing; or if lemon juice is not to be had, a good substitute is made, by dissolving twenty-five grains of citric acid or essential salt of lemons in water, and using it like the fresh juice. If opium given by the mouth be rejected, that medicine must be employed in the form of clyster, made by adding to a tea-cupful of thin starch, a large tea-spoonful of laudanum; and repeating this according to the urgency of the symptoms. Opium and camphor, mixed up together in the form of cataplasm, may be applied to the region of the stomach. When the vomiting and purging have abated a little, we are then to give mild nourishment; and that if possible of a laxative nature, as mutton-broth, chicken-broth, and the like. A

mild purgative should be administered, such as castor oil, or the neutral salts; because the effect of the opium may be, to detain in the bowels some of the vitiated bile; and this accumulating, will give rise to a renewal of the symptoms. To obviate the great debility and depression consequent on the violent efforts and great evacuations in cholera, we are to give a little of the aromatic spirit of wine; or of the compound tincture of bark or of cinnamon, not much diluted. All irritating and indigestible food is to be forbidden; and all fatigue or exposure to the weather, especially when hot and damp, is to be avoided for some time.

CHOLERA, MALIGNANT. This disease, though differing from the former in numerous important particulars, has obtained the same name, from its being attended by vomiting and purging, with cramps in various parts of the body. If this disease existed formerly, it never attracted notice as a wide-spreading and fatal epidemic till the year 1817, when it appeared at Jessore in Bengal; and after ravaging the Continent and Isles of Asia, and spreading to China, it has continued its destructive course westward through Germany and the Russian Empire, till it has at length reached the British Islands. In fourteen years, it has invaded every variety of climate, attacked people of every degree of civilization and habit of life, and has swept off at least fifty millions of the human race.

Symptoms. Malignant Cholera consists of three stages; the premonitory, the stage of collapse, and the stage of reaction.

1. *The premonitory stage.* The attack of the disease is sometimes quite sudden; at other times, there are precursory symptoms, of which the duration varies from a few hours, to three or four days. There is a sense of general uneasiness and oppression, increased sensibility, not unlike a delusive feeling of high health and animation; pains about the navel; sometimes tremors and debility. The person is affected with derangement of the alimentary canal, more or less severe, indicated by sickness and vomiting, flatulent noises in the bowels, and frequent loose, but natural stools; these symptoms being accompanied or succeeded by thirst, headach, languors, and cramps or twitches in the limbs, breast, and other parts of the body. Such derangements often occur after some irregularity to which the patient has not been accustomed, as a luxurious meal, an indulgence in wine, spirits, beer or porter, the eating of pastry, or other indigestible food; or after being exposed to the night-air, or to cold and damp. In ordinary seasons, these ailments might be left to nature, or carried off by a gentle laxative. But in seasons and districts where Cholera prevails or is expected, no person, through fear of being thought whimsical, should neglect even very slight uneasiness; if the alarm be a false one, little harm is done; but if there be real danger to follow, it is of unspeakable consequence to have a medical man on the watch, to apply the remedies before the strength fails, and before the second stage, or that of collapse, comes on.

2. *The stage of Collapse, or great depression of the vital powers.* After the stomach has been emptied of any alimentary matters, and the evacuations by stool have continued some time, the vomiting and purging consist almost entirely of a fluid strongly resembling rice-water. No bile is now seen in any of the evacuations. The discharge of urine is entirely suspended. There is great pain at the pit of the stomach, cramps in the legs and arms, and sometimes in the belly; the thirst is intense, and the craving for cold water urgent. Every point in the surface, and even the tongue, is cold; while the air expired from the lungs partakes of the same diminution of temperature. The skin is pale, or livid or blue, and the fingers bent inwards to the palm of the hand. The eyes are hollow and sunk in their sockets; the white appears suffused with blood; the voice is tremulous and feeble; but the mental functions are generally entire.

Death soon closes the scene, sometimes with an increase of pain or spasm, sometimes with a very violent attack of convulsions. Sometimes just before death, the patient declares he feels better; and shortly afterwards breathes his last.

3. *Stage of Reaction.* When the patient, by the use of remedies or the spontaneous efforts of the constitution, escapes death in the stage of collapse, it is followed by the third stage, or that of reaction, resembling in many of its symptoms the common typhus fever of this country. The eyes are suffused with blood, there is deep sleep, almost approaching to apoplexy, or pain in the head, with delirium; the skin becomes hot and dry, the tongue covered with a thick white crust; and not a few die in this stage.

The distinctness of these three stages, and the length of time allotted to each, varies very much in different cases. The premonitory symptoms are often imperceptible; and the patient seems to pass in a few hours from perfect health to the state of complete and fatal collapse.

Causes. We are as yet ignorant of any thing that can be assigned as the original cause of Malignant Cholera; but whatever be its origin, it has continued its ravages in spite of every vicissitude of weather, or extreme of heat or cold; and in Russia, was unchecked by a degree of cold under—30 of Fahrenheit, or 62 below the freezing point. The most interesting inquiry now is, whether it be propagated by contagion or not. We infer that *Malignant Cholera is contagious*, from the facts observed relative to its progress and transmission from Asia to Europe; and also from some very striking instances that have occurred in this country, of the disease being communicated by intercourse and contact, such as in any other case, would never be questioned by any practical physician, as being quite sufficient to account for the production o' a contagious disease. The question whether Cholera be contagious, is important, chiefly for the conduct to which it leads; and where there is any doubt, it is always wisest to err on the side of safety. If Cholera is believed to be contagious, a sensible non-professional person, if the disease invades his family, will be careful to secure ventilation and cleanliness, and promote fumigation by chlorine, or the fumes of nitrous acid. For himself, he will avoid all intemperance and indigestible food; and also exposure to fatigue, night-air, or damp; and if he should be acting on a false supposition of the infectious nature of the disease, he will have done nothing wrong, but every thing for the benefit and comfort of himself and the sick. But no good is done to the sick on the supposition of non-contagion; they have no greater share of proper attention than they would otherwise have; and less care is taken to keep away from them what would be hurtful. In the present case, the best practical conclusion is, that Cholera appears so far contagious, as to justify very careful seclusion and preventive measures whenever a case occurs; but not such as to call for any of the harsh and despotic means which military governments employ to enforce quarantine.

Who are most subject to cholera? It is uniformly found, that whatever debilitates the constitution, as poor living, hard labour, scanty clothing, and intemperance, are among the most powerful predisposing causes. In all the towns which Cholera has visited in Britain, whoever have been seized at last, the intemperate and profligate were always its first victims. In these, the sunken eye, the despairing countenance, the cold and livid surface, form of themselves an affecting spectacle, deepened by the thought, that many of the sufferers were but the day before conspicuous for brutal intemperance or noisy jollity; and that in others, the symptoms are the closing scene of a long life of squalid vice and misery. But though the poor and profligate suffer first and suffer most, all irregularity in those of the better classes, as well as in their poorer brethren, is

fraught with danger. All debilitating circumstances render men more liable to Cholera; as scanty food, excessive evacuations by strong medicines, loss of blood, night-watching, fatigue, anxiety, fear. Those who are in great dread of being infected, not unfrequently become so; while those who, by natural or acquired firmness of mind, feel little anxiety, or confide in the use of precautions, drugs, or charms which they think will ward off the disease, very frequently escape.

Diagnosis. The difficulty of distinguishing this disease, exists only in the first and third stages; in the second, there can be no mistake. It is in vain to find out analogies between Cholera and other diseases; the clammy sweats, the death-like blueness, the shrivelled hands, the tremulous and feeble voice, the rice-water discharges, the suppression of urine, form a combination of symptoms such as no other disease presents, and which, once seen, make an indelible impression on the mind of the observer. In the first stage, when there is vomiting of the food lately swallowed, or discharge of the usual stools somewhat thinner than usual, with rumbling in the belly, headach, short and flying pains or cramps; though these may occur where there is no Cholera, it is wise to treat them, when this visitation is in a district, as if they were the certain forerunners of the second stage. The nature of the feverish symptoms of the third stage is to be ascertained by the immediately preceding history of the case.

Prognosis. In a large proportion of cases, it is unfavourable. In the first stage, when we can keep up something like a natural heat, when the pains and spasms abate, and the vomiting ceases, we hope the case is to be favourable: but when the second stage is fairly formed, when the skin is deadly cold, when the pulse is nowhere to be felt, and the sinking and agony are intense, our hopes of doing good are small. When the pulse and heat return, when the spasms abate, when drink or medicines remain on the stomach, when bile appears in the stools, and when there is some flow of urine, these indicate a more hopeful state of matters, and encourage us to proceed with diligence in our remedial means.

Treatment. 1. When advice is asked in the first or primary stage, our care should be to promote the easy discharge of any alimentary matters by vomiting; and also to promote gentle purging, which may be controlled when the bowels are freely evacuated. These indications are safely fulfilled by an emetic of ipecacuan, in the usual dose of fifteen or twenty grains; or by using flour of mustard, a tea-spoonful to a cupful of water. The laxatives given should be of the mildest description; a table-spoonful of castor oil, or a tea-spoonful of Gregory's mixture; or one pill of aloes, alone or with colocynth. A couple of drachms of the opiate confection of the Edinburgh Pharmacopœia, or a tea-spoonful of the tincture of rhubarb, repeated once or twice at most in a day, will probably relieve the spasms, and act as a tonic to the stomach and bowels. It is in this stage that blood-letting promises to be of most service, but it must not be indiscriminately employed. In the strong and plethoric, in those who have indulged too freely in eating and drinking, it may be useful; but not in the worn-out constitution of the habitual drunkard, or of those whose frames are weakened by poor living and hard labour. This is the time when those who are to be removed to an hospital should seize the opportunity; and those whose circumstances secure all proper attention at home, should abstain from full living, from excess of wine, ale, or spirits; should suspend the cares of business, and be carefully watched by their medical attendant.

2. In the second stage, we attempt to restore the warmth of the body, principally by the diligent use of external heat by friction with dried flannels, by warm blankets or warm sand, by bricks, by bottles filled with hot water, or by the contrivance of tin vessels adapted to different parts of the body, and heated by steam or

boiling water. Internal stimulants, and especially opium, in all its shapes, and brandy, are to be used with extreme caution; and with due apprehension of the danger of opium exerting its narcotic powers, and so preventing the due action of the heart from being restored; and looking forward to the probability of brandy giving rise to inflammation, and thus adding to the danger of the succeeding typhoid fever. Bleeding in this stage is of superlative hazard. Galvanism or electricity, when skilfully applied, may be of service. In this depressed stage, all personal exertion of the patient must be strictly forbidden. To raise him from the horizontal posture would be in general instantly fatal. The internal parts are to be fomented by means of clysters of great bulk, as hot as can be prudently applied, and aided by a little soap, turpentine, and other stimulant substance. This is a very excellent way of diffusing heat over a great proportion of very important organs. Mustard poultices are to be applied on the inside of the thigh; oil of turpentine is to be rubbed on the back and belly; and some use the nitric acid (aquafortis) to rub the breast. The dead insensibility of the skin renders this terrible caustic comparatively insignificant.

3. When the heat of the surface, and the pulsation of the arteries returns a little, the measures above recommended are to be still pursued, diminishing the assiduity of their application very gradually. The internal stimuli are to be given in smaller doses, and at longer intervals, especially opium and brandy. Calomel in doses of five grains, every three hours, is to be given; and it is to be followed up by jalap, or rhubarb, or castor oil. The thirst should be allayed by toast-water or gruel, but not by any cold drink. A little calf's foot jelly, sago, or panado, should be given; and when the stomach seems a little quieted, and no very strong feverish symptoms are present, weak beef-tea, or chicken broth, or similar aliment should be used; but never in such quantity as to distend or overload the enfeebled stomach. Quinine, and the tincture of rhubarb, should be employed as tonics, and the urinary discharge promoted by the sweet spirit of nitre; while the bowels are carefully regulated, but no active purging ventured upon. In short, the convalescence should be conducted on the general principles now well known, of giving nature time to recover after violent diseases, and not forcing a debilitated system by over-officiousness in the administration of either food or medicine.

Means of prevention. Individuals should avoid all unnecessary intercourse with infected districts, or with persons ill of the disease; such attention being paid to clothing, diet, and regimen, as is proper at all times, but more especially so, when frequent instances are known to happen of the digestive organs being disordered. It is prudent to avoid exposure to cold and damp, night watching and revellings; and as excess in eating, and in the use of wine and spirits, and pastry, nuts, almonds, and the provocatives of luxury, are pernicious generally, so now they ought to be particularly avoided. Cleanliness and ventilation are to be especially studied, good fires should be kept, and warmer clothing worn; and the tainted air of crowded places, where artificial lights are necessary, should be avoided. Fumigations are very useful; and are easily made by diluting sulphuric acid with equal parts of water, and pouring it gradually over the chloride of lime or of soda.

The mind should be kept well regulated and tranquil. The firmest advocates for contagion do not consider Cholera as possessing that intense and certain degree of it, which renders it dangerous to come within a great distance of a patient. But though there is nothing to justify a shrinking timidity, there is the greatest reason to regard Cholera as utterly precluding a reckless and fool-hardy conduct. Even though Cholera were fatal in fewer cases than it is, there is something in the suddenness and rapidity of its course, and in the class of people on whom it

first seizes when it comes to a place, that render it impossible to contemplate it with indifference. They who assiduously use every precaution that science or experience teaches to ward off the disease, or to mitigate its violence, but trust in the blessing of Providence alone to make the means effectual, will be delivered from the influence of unmanly fear, and from that liability to infectious diseases, which such fear is well known to impart. This is one great point in that propriety of conduct, so desirable during the prevalence of a disease, calculated as this is, to impress such a sense of the helplessness of man, and the visitation of a superior power.

CHOLERIC TEMPERAMENT is that constitution, in which, according to the ancients, the yellow bile predominated.

CHORDEE. A painful spasmodic erection of the penis. It occurs most frequently in the second stage of gonorrhœa, and takes place chiefly when the patient is warm in bed. For this affection, opiates are the most useful remedy; forty drops are to be given at bed-time, and the parts affected are to be rubbed with laudanum, or a strong solution of opium in water. In some cases, leeches may be applied, or it may even be necessary to employ general blood-letting.

CHOREA SANCTI VITI. *See* DANCE OF ST. VITUS.

CHORION. The external membrane of the fœtus, or that which touches the internal surface of the uterus.

CHOROID MEMBRANE, or CHOROID COAT. The name of one of the tunics of the eye, lying next under the sclerotic, or firm outer coat.

CHROME, or CHROMIUM. A metal obtained from a beautiful red mineral with a shade of yellow, found in the mine of Beresof, in Siberia.

CHRONIC. An epithet applied to diseases that continue for a length of time, opposed to *acute*.

CHYLE. The milk-like liquor which is found in the lacteal vessels and in the thoracic duct, some hours after taking food. It is the last form which the food takes in digestion, before it is mixed with the blood. Numerous lacteal vessels open into the intestines, especially into the jejunum and ileum; these absorb the chyle, and carry it through the glands of the mesentery, whence it passes into the thoracic duct, by which it is conveyed to the left subclavian vein; at that point it joins the current of the blood, and by its mixture with it in the lungs, it supplies the materials for the various secretions, and repairs the waste of the system.

CHYLOPOETIC VISCERA. The organs which assist in the formation of chyle, viz. the liver, the spleen, the pancreas, the stomach, and upper part of the intestines.

CHYME. A pulpy mass, into which the food is reduced by the action of the gastric juice, after it has been masticated by the teeth, and mixed with the saliva. It is in the state of chyme when it passes out of the stomach into the intestines.

CICATRIX. A seam or scar left by a wound. When a wound heals, leaving such a mark, it is said to be *cicatrized*.

CIDER. A refreshing and delightful drink, made from the fermented juice of apples. It has little spirit; and hence is apt to become sour in the stomachs of dyspeptic patients, by whom therefore it should be avoided. "When in a good state, it is a very wholesome drink, though accused of producing rheumatism. Cider drinkers are generally thin, but firm and muscular; certainly subject to rheumatism, and occasionally to gout; but on the whole, healthy and long lived. The sweet ciders of Herefordshire are less wholesome than the strong, more pungent cider of Devonshire. Cider, when made early, of unripe fruit, is sharp and acid, apparently able, without any suspicion of lead, to occasion the colica pictonum, (Devonshire colic, or dry belly-ach.) The poison of this metal, however, often impregnates, from accident or design, this otherwise wholesome beverage; and the most fatal colics and palsies are the consequence" (DR. PARR *of Exeter*.)

CINERITIOUS. Resembling ashes in colour, a term applied to the cortical or external part of the brain, and of the kidneys.

CINNABAR. A compound of sulphur and mercury, of a brilliant red or vermilion colour. It is much used as a paint.

CINNAMON. A well known sweet and pungent aromatic. The best cinnamon is imported from Ceylon; but the cinnamon-tree, *Laurus Cinnamomum*, which is a species of laurel, also thrives in Malabar, Sumatra, and other Eastern islands. Cinnamon is found in trade of very different qualities; the best is nearly as thin as paper, of a yellowish brown colour, and breaks splintery; other varieties are coarser and thicker, and are not so pungent and sweet. The principal use of cinnamon is as an accompaniment to other medicines, to disguise their bad taste, or to prevent their being flatulent on the stomach. The oil of cinnamon is a powerful stimulant; and is sometimes used as a cordial in cramps of the stomach, and in fainting. There is a distilled water obtained from cinnamon, very useful as a vehicle of nauseous medicines. The compound tincture of cinnamon is a very warm aromatic, and is used in some cases of vomiting. In languor and flatulency of the stomach, a tea-spoonful or two may be given in water, wine, or any convenient vehicle.

CIRCOCELE. An enlargement and distension of the spermatic vein. It occasions considerable pain; and in some cases, is attended with wasting of the testicle. The pain, which is of a dull kind, and felt in the back, is relieved by suspending the scrotum. When this disease is mistaken for a rupture, and a truss is applied, bad effects may follow, such as great enlargement of the vessels, and shrinking of the testicle. The method of distinguishing circocele from rupture is the following: Place the patient in a recumbent posture, return the swelling into the abdomen by the abdominal ring; make pressure at the ring, and desire the patient to rise; if it be rupture, the swelling will not appear, being kept in by the pressure at the ring; and if it be a distended state of the vessels, the blood will not get into the abdomen, owing to the pressure, and therefore the swelling will rapidly increase. This complaint is seldom cured; and is to be palliated by cold lotions applied to the testicle and spermatic cord, when there is much pain; and by supporting the parts with a bag-truss. When the symptoms are severe, leeches should be frequently applied, the bowels should be kept open, and the patient should remain in the horizontal posture.

CIRCULATION. In the more perfect animals, the blood passes into every part of the body, and is returned again to the heart in a certain series. No portion of blood can approach the same part of the body a second time, without first passing through the lungs and the heart. This function is termed the *Circulation of the Blood*. It is performed in the following manner: The left ventricle of the heart contracts, and throws the blood into the aorta or great artery of the body; and this contraction of the heart, aided by a muscular power in the arteries, and by their elasticity, transmits it into every part of the body. The extremities of the arteries are continued into small branches of veins; these gradually increase in size till they form themselves into two large venous trunks, one bringing back the blood from the lower extremities, the other from the head and upper extremities. These large veins meet in the right auricle of the heart; this contracts and sends its blood into the right ventricle; and the right ventricle propels the blood into the pulmonary artery, which subdivides into numerous branches, and conveys the blood through the lungs, where it is exposed to the influence of the air; and by the oxygenous portion of it, is rendered fit for being again sent to the various parts of the body. The extreme branches of the pulmonary artery continue themselves into pulmonary veins, which carry the changed blood into the left auricle; by

this it is thrown into the left ventricle, and the same circuit is perpetually repeated. In a healthy adult person, the heart performs between seventy and eighty contractions in a minute. The pulse is dependent on the heart, and is an index of the number, the force, and the succession of its contractions. *See* PULSE.

The function of the circulation, which plays such an important and conspicuous part in the animal economy, was quite unknown to the ancients. Instead of a circulation, they fancied a libration, and compared the motion of the blood to the tide of Euripus. The honour of this great discovery is due to Dr. William Harvey of Dover, afterwards physician to Charles I. When studying in Italy, he learned the structure of the valves in the veins from Fabricius ab Aquapendente; and, as he himself informed Mr. Boyle, when he took notice that the valves in the veins of so many parts of the body were so placed, that they allowed a free passage of the venous blood towards the heart, but opposed its motion in a contrary direction, he was led to think, that these valves had not been placed in that manner without design; and no design seemed more probable than that, since the blood could not, because of the interposing valves, be sent by the veins to the limbs and other parts of the body, it should be sent out from the heart through the arteries, and return through the veins, whose valves did not oppose its course that way.

CITRIC ACID. The acid obtained from oranges and lemons. It is also found in many other fruits, as the cranberry, the bird's cherry, and the fruit of the dog-rose. Strawberries, raspberries, and gooseberries also contain it, mixed with the malic acid. The simple expressed juice of lemons will not keep, on account of the syrup, mucilage, and other matters which it contains, and which cause it to ferment. This is much to be regretted, as lemon-juice is the great specific against sea-scurvy, and is possessed of virtues sufficient to disarm that dreadful scourge of all its terrors. A method was invented by the great Swedish chemist Scheele, of obtaining the citric acid pure and crystallized; and by his process, or some similar one, it is manufactured in great quantities, and sold under the name of the concrete salt of lemons. The process is the following: Powdered chalk is added to lemon juice, the carbonic acid is disengaged, and the lime combines with the citric acid, forming citrate of lime. To this, sulphuric acid is added, and a sulphate of lime is formed, which being insoluble, falls to the bottom, and the citric acid remains in solution in the water. This is evaporated and crystallized. Lemon juice is used in making the saline effervescing draughts, so useful in many cases of vomiting; and when lemon juice cannot be procured, the crystallized citric acid, dissolved in water, will answer the purpose. For sea-scurvy, the lemon juice, as nearly pure as possible, is the best; but in some situations we must be content with the crystallized acid. The citric acid is an excellent refrigerant, and, as such, is given in many feverish disorders. Lemonade, or diluted lemon juice, sweetened with sugar, is a pleasant drink in fever, and will both quench thirst and obviate the tendency to putrescency.

CITRINE OINTMENT. An ointment made with lard and the nitrate of mercury; of great utility in diseases of the skin, being stimulant, cleansing, and alterative. This ointment, when weakened with an equal quantity of simple ointment, is an excellent application in many diseases of the eyes, especially in that redness of the lids which is habitual to scrofulous persons.

CITRON. The fruit of the *Citrus Medica*, a tree of the same genus as the orange and lemon, and not differing very much from them in its properties. The fruit is larger and less succulent than the lemon.

CLAP, *or* GONORRHŒA, is a discharge of yellow fluid from the urethra, in consequence of the application of morbid matter, generally following the concubitus impurus. The time that elapses

between the application of the matter and the commencement of the running, varies in different cases, from two days to three or four weeks; but the most usual time is from six to twelve days. It begins with an itching and soreness about the private parts, with a soreness along the course of the urethra; soon after which, a slight discharge of whitish matter takes place, and there is heat and pain in making water. In the course of a few days, the matter discharged is increased in quantity, and becomes of a greenish or yellowish colour; there is redness and inflammation about the parts, the stream of urine becomes smaller, and the attempt to pass it is attended with much pain and scalding. It sometimes happens, that when the inflammation is considerable, there is a slight discharge of blood. The prepuce swells so much that it cannot be drawn back, which symptom is called a *phimosis*; or, being drawn back, it cannot be brought forward again, which occurrence is termed *paraphimosis*. The neighbouring parts suffer. The bladder becomes irritable, and there is frequent call to make water; also uneasiness about the rectum. One, or both, of the testicles swell, occasioning great pain, and some degree of fever. Chordee also is not an unusual symptom. The time for which a clap will continue, depends much on the conduct of the patient himself; on the timely or late use of remedies; and in some cases, on the acrimony of the infecting matter. If the proper means are used, and if the patient is guilty of no excesses, sensuality, or irregular living, the matter will, in the course of a fortnight or three weeks, become thick, and somewhat viscid; it will then gradually diminish, and at last cease entirely; but if the same riotous living be continued which brought it on, if indulgence in wine and other stimulants be persisted in, the symptoms will increase in severity, continue for a long time, and be followed by very unpleasant consequences, as gleet, warts, and strictures in the urethra.

Treatment. If there be much inflammatory action when the patient is first seen, if the pulse be quick and strong, if there be very great heat, pain, and difficulty of making water, it may be proper to employ bleeding, both general and local. The body is to be kept open by the milder purgatives, which do not irritate the rectum and neighbouring parts, such as castor oil, and the neutral salts dissolved in a considerable quantity of water; the patient is to drink plentifully of mild diluent drinks, as barley water or linseed tea, adding to them some dissolved gum arabic; all irritation is to be avoided, the diet is to be spare, no spirituous or fermented liquors are to be used, and quietness and rest are to be enjoined. If the symptoms are more moderate, we may dispense with the bleeding, taking care to observe the other directions given above. When the running has continued for a week or ten days, if there be no other bad symptoms present, it is to be checked by the prudent use of astringent washes, which are to be thrown by a syringe into the urethra. Such washes may be made by dissolving twenty grains of white vitriol in eight ounces of rose water, or eight grains of blue vitriol in eight ounces of water. It is to be particularly noted, that it is very dangerous to use astringent injections on the first appearance of gonorrhœa, or to use them strong at any time; there is great risk of inducing inflammation and swelling of the testicle. If this happens, cooling lotions are to be applied to the part, and it may be necessary to use even general and local bleeding. A return of the running is to be solicited by warm fomentations, and injections of warm milk into the urethra. Without entering into the controversy about the identity or difference of the matter of syphilis and gonorrhœa, we may state, that it is not in general necessary to make use of mercury in gonorrhœa. Swellings of the groin are to be prevented, if possible, from coming to a suppuration, by the use of cold lotions made of a solution of sugar of lead, by a spare diet,

and by giving cooling purgatives. We are to attempt the removal of phimosis or paraphimosis by the application of cold, or by diminishing the swelling by means of leeches; and it may be necessary, if the tightness cannot be removed by other means, to cut through the prepuce. During the whole of the disease, it will be necessary to pay great attention to keep the parts clean, and to prevent excoriation and ulceration by the lodgement of acrid matter. The distressing symptom called chordee is to be obviated by washing the parts with a solution of opium, or the tincture, and keeping cloths wet with them to the parts: a large opiate is to be taken at bed-time. The disease in women requires the same general plan of treatment; but it is less obstinate in them, from the greater shortness of the urinary passages. It much resembles what is commonly known by the name of whites.

CLARET. A wine brought from Bourdeaux, of a delicate flavour, and distinguished by a perceptible combination of the acid with the resinous flavour. It is less heating, and more aperient than other wines, and agrees well with the stomach when taken in moderation; if taken in excess, claret produces acidity and indigestion, often rather from the quantity than the quality. But the clarets of wine-merchants are often very substantial wines, compounded in various ways for the English market. They are thus often mixed with hermitage, and with raspberry brandy; and if procured through doubtful channels, as we find them at taverns, they are too frequently acescent, and apparently composed of some claret, mixed with faded port, or some other spoiled wines. The clarets, however, derived from respectable sources, are agreeable, and comparatively innoxious wines; they are moderately exhilarant, and have a tendency to relax the bowels, and increase the flow of urine. They are the wines fitted for those persons who are easily excited, and in whom the stronger wines readily produce febrile action; and in that state of the system which is connected with a tendency in the urine to deposit white sand, claret may be regarded as an effective remedy. (Brande's *Manual of Pharmacy.*)

CLAVICLE. The collar bone. It extends from the top of the shoulder to the upper part of the breast bone, and prevents the arms from coming too close to the sides in the various motions of the superior extremity.

CLEANLINESS. The putrefaction of animal and vegetable substances is one of the chief sources of malignant disease. The effluvia produced during their decomposition, and even those which are exhaled from the skin and lungs of the healthiest animals, when concentrated and allowed to stagnate, give rise to fevers of the most fatal tendency, and even, in the opinion of some, to the plague itself. Hence the necessity of cleanliness in every situation; and, in this respect at least, physical evil is productive of moral good. Hence the necessity of preventing all accumulation of filth in the streets and alleys of towns; hence the utility of draining marshes and improving the cultivation of a country; and, to descend to individuals, hence the beneficial effects of personal and domestic cleanliness, to prevent cutaneous and infectious diseases, and to avert the unhealthy state of the system which so often accompanies squalid and vicious poverty. If cleanliness be essential to the preservation of health, it is no less so to the comfort and ease of the sick. Unless their debility be very great, and unless it be productive of much pain and suffering to move them, the bed and body linen of the sick should be kept very clean, and frequently changed; their apartment should be clean and well aired, and all offensive discharges should be very carefully and speedily removed.

CLEANSINGS of Childbed Women. *See* Lochia.

CLIFTON, a village near Bristol; a frequent resort of consumptive patients. *See* Bristol Hotwell.

CLIMATE is considered by physicians, not with reference to geographical situa-

tion, but to the state of regions as to the warmth and steadiness of their temperature, or the dryness or moisture of their atmosphere. The interior of continents and islands is generally mountainous, and, in consequence, cold. From the bracing qualities of the prevailing winds, the inhabitants are robust, and disposed to inflammatory diseases: invalids or persons coming from warm climates should therefore prepare themselves gradually for mountainous regions, by not coming abruptly into those colder parts. Except the eastern parts of Great Britain, during the spring and early summer months, when the east wind prevails, the climate near the sea is mild and moist. In most countries, consumptive patients are therefore often sent to the sea coast, where the air is more temperate in winter, and the heat more tolerable in summer. Invalids, in various diseases, are generally sent to Lisbon, Madeira, and the south of France. At Lisbon, the temperature is not always steady, and the cold is sometimes considerable. The sick are likely to want many comforts at Madeira, from the character and manner of its inhabitants; and there are not very good situations for taking exercise. The south of France is said to be subject to sudden and violent storms. The coast of Devonshire is considered as a very favourable place of resort in various cases of disease, especially of the chest. The advantages of a mild and equable climate, even were it in our power to point out any that is uniformly agreeable, are counterbalanced by many inconveniencies as hurtful to the sick and debilitated, as the mere circumstance of a lower temperature. The being surrounded by strangers who cannot sympathize in their cares or feelings, the embarrassment arising from the use of a foreign language, and the ideas of comfort so different from what the inhabitants of Great Britain consider as desirable, combine to produce a state of irritation and a sense of unhappiness, which will be more injurious to a patient than any thing he must necessarily suffer from the atmosphere of his own country. An artificial climate may be made by those in easy circumstances; and thus they may be spared all the fatigue of travelling, and the pain of suddenly and forcibly altering their condition and habits. *See* PENZANCE, TOR QUAY, SIDMOUTH, NICE, LISBON, MADEIRA, &c.

The diseases most common in cold climates are, catarrh, consumption, scurvy, rheumatism, and the various inflammatory affections; in warm climates, the plague, remittent fevers, the yellow fever, dysentery, inflammation and other disorders of the liver and biliary secretion, are the prevailing maladies.

CLINICAL is derived from a Greek word signifying a bed; and it is generally applied to lectures delivered by a physician or surgeon, respecting the cases of patients confined to bed, who are visited by the practitioner and his pupils; to whom he details, at some convenient time and place, the nature of the disease, and the intention and effect of the remedies which he employs.

CLOTHING. The choice and regulation of clothing is of great importance both to health and comfort. It will readily be supposed that the physician does not meddle with dress as to its form and decoration, but that his instructions are chiefly confined to what is worn next the skin; and that he will forbid all such articles of dress as are likely to prove injurious by pressing on tender parts, and altering their structure, or impeding their functions. In this variable and uncertain climate of ours, *Woollen* garments are by far the best kind of clothing. They enable the body to resist the effects of the frequent changes of weather; being what the chemists call bad conductors of heat, they both prevent the natural warmth of the body from escaping, and the external heat from reaching it, and thus preserve it in a steady temperature. When sweating occurs spontaneously or is induced by artificial means, flannel does not take up the moisture in a fluid form, but rather as a vapour, and thus the coldness of the sweat is not perceived. *Flannel* is some-

times debilitating by the perspiration it excites too constantly; or, by its roughness, it is irritating to some tender skins; it requires in the first case, either to be worn of a very thin texture, or to be exchanged for cotton; and in the second case, it must be discontinued, and linen must be used. Flannel which is worn next the skin should be frequently changed; it should be washed in water not very warm, which prevents its becoming too thick. *Cotton* has all the good properties of flannel, though in an inferior degree. *Chamois* is used next the skin by many people, as uniting the advantages of both the former materials. *Linen* forms inner clothing of great comfort to the strong and healthy, being highly conducive to cleanliness; and if it be frequently changed, it renews the air between the linen and the body. *Silk* should not be worn next the skin, as it has no affinity for water; and the perspiration not being absorbed, is apt to fret the body, and to cause a shivering when it cools. It should be worn above flannel or linen. *Fur* is necessary in very cold climates, but it is apt to harbour insects, and it is one of the most powerful retain ers of contagion.

In our climate much caution is required in the changing of dress. The winter clothes should be worn till summer is unquestionably arrived. A few days of sunshine in April or May should not tempt us to lay aside our warm clothing.

It is of the greatest importance to health, to keep the extremities dry and warm; and in those who are subject to gout, to any complaint of the head, the chest, or the bowels, particular attention should be paid to the feet. The shoes should be carefully kept from admitting moisture; the stockings should be warm and frequently changed. The feet should be washed often, and not in very hot water. If we proceed to the more exterior parts of our clothing, we shall find that the principal thing to be attended to is to prevent undue pressure on any part by ligatures, bandages, garters or stays. The bloodvessels are liable to be compressed by injudicious dressing; or the abdomen and chest, with the important organs contained in them, to be hindered in the free exercise of their functions. In the regulation of the female dress, too much is sacrificed to fashion and appearance. But the physician ought to be heard, when he warns the delicate young lady of the danger of cold, consumption and sore throat, from the insufficient covering of the neck, the breast, and the arms; and when he points out the danger of stays and tight lacing to induce disorders of the liver and other viscera of the abdomen, or to cause headachs and spitting of blood by hindering the due performance of the circulation through the lungs.

The clothing of infants and children is to be regulated by the season and by the constitution of the child. Though we are no advocates for indulgence and relaxing management, we consider it as an improper practice to expose children to much cold, or to dress them too thinly, for the purpose of making them hardy. *See* CHILDREN *and* INFANTS.

CLOVES. The unexpanded flower buds of the *Eugenia caryophyllata*, a beautiful tall tree growing in the Molucca islands. The Dutch, in order to secure the monopoly of the valuable spice produced by it, destroyed all the trees, except in Amboyna. But the clove tree now thrives at the Isle of France, and at other places. Every part of the tree is highly aromatic, especially the leaf stalk. Cloves are the flower buds gathered before they open; they are exposed to sunshine for some days, and then dried in the sun. The colour of cloves is of a deep brown; their smell is strong, peculiar, and grateful. Their taste is acrid, aromatic, and permanent. They are used as a spice in various articles of food; and by their aromatic and stimulant qualities, they diminish the griping which is apt to arise from other medicines; and when added to bitter and other infusions, they make them sit easier and better on the stomach. Good cloves yield about one-

sixth of their weight of essential oil, and a little of this oil is used in the making of the compound colocynth pills. It is also used as a local application in toothach.

CLUB-FEET. Children are sometimes born with the feet distorted either outwards or inwards. This deformity is both disagreeable to behold, and inconvenient for walking; and parents are naturally very anxious for its removal. The bones being in a soft and grisly state, renders this very often practicable, if the cure be begun very soon after birth. In most large towns, there are artists who form various kinds of machinery for this purpose; and very simple means will do to restore the parts to their natural position, and to keep them there. An experienced surgeon should always oversee the operations of the artist.

CLYSSUS OF NITRE. The alchymists used to mix charcoal with nitre, and explode them together in a tubulated earthen retort, to which an apparatus of glass vessels was luted. Their apparatus was generally blown to pieces; but they sometimes succeeded in obtaining a little acidulated water, which they called *clyssus* of nitre, and to which they attributed wonderful medical virtues.

CLYSTERS. Substances thrown into the rectum by mechanical means. The principal clysters are those of the purgative, the emollient, and the anodyne kind; and in some cases, we attempt to convey nourishment into the system by means of a clyster. The instruments used are either a large syringe, or a bladder and pipe; and the kind and quantity of the matter thrown in, is to be regulated by the age of the patient, and the purposes to be answered. A *purgative* clyster may be made of the infusion of senna, adding to a pound of such infusion, an ounce and a half of Epsom salts; or a quantity of gruel with a handful of common salt; to which a little butter, or sweet oil, or castor oil may be added. Though purgative injections are of excellent service in many cases, and produce the evacuation of the rectum, and sometimes of a larger extent of the bowels, yet in few cases of disease should we rest satisfied with them, but should generally endeavour to give purgatives by the mouth. *Emollient* clysters are made of gruel or barley water, and are used in cases of colic, and in certain stages of inflammation of the bowels, to act as internal fomentations or poultices. A large quantity should be given, and in general as warm as can be easily borne. Emollient clysters are sometimes very useful in quickening the progress of lingering labours. *Anodyne* clysters are of essential benefit in many severe and painful affections. They should be given in small quantity: a tea-cupful of thin starch or gruel, with a tea-spoonful or even more of laudanum, is to be injected, and as little irritation as possible should be caused in the administration of it; and if the patient is of discretion enough, he should make every exertion to retain it. Such a clyster is of excellent benefit in looseness, after any offending matter has been cleared away; it is necessary in straining, and allays that most troublesome symptom. In some unhappy cases, when nourishment cannot be taken in by the mouth, an attempt is made to convey it into the system by *nutritive* clysters; and the composition of such is strong beef tea, yolks of eggs, and a quantity of laudanum to assist the power of retention. Such injections may prolong life for a little, but can never be expected to do much. Sometimes *carminative* or *antispasmodic* injections are given; these are made of the tincture or infusion of assafetida, and give relief in cases of spasm or flatulence of the larger intestines. A very powerful, but very dangerous injection is sometimes necessary in cases of rupture. It is made by boiling a drachm of the cut leaves of tobacco for ten minutes in a pint of water. One half only of this is to be given in the first instance; and the patient must be watched on account of its highly debilitating effects, and the violent vomiting which it excites. The tobacco injection should never be administered, except in

the presence of a practitioner of judgment and experience.

COAGULABLE LYMPH. One of the component parts of the blood, capable of coagulation by heat and acids. In certain diseases it is separated from the blood in large quantities, and is found in circumscribed cavities in certain kinds of dropsy.

COAGULATION. The thickening or curdling of liquors by the application of heat, or admixture of other substances. The white of egg is coagulated by heat; and milk is coagulated by rennet or infusion of the stomach of a calf, and by acids.

COBALT. The name of a metal of a grey colour with a shade of red. Its oxide is used for giving a blue colour to glass.

COCHINEAL is the dried body of the female of an insect found in Mexico. The male only has wings, the female has none, and remains constantly attached to the leaves of the tree on which it feeds. Their taste is acrid, bitter, and astringent; they are used only for the sake of the fine red colour which they produce; hence in pharmacy, they are employed to give a beautiful red to some tinctures. Their colour is easily extracted both by water and alcohol. Cochineal has been recommended as allaying the inordinate action in hooping-cough, especially when given with carbonate of potass; but its efficacy is very small, and few practitioners think it worth their while to try it.

COCCULUS INDICUS. The berries of a plant growing in Malabar and other parts of the East Indies. They are poisonous if swallowed, and bring on sickness, fainting, and convulsions. They have an intoxicating quality, and are supposed to impart that quality to some of the London porter made by dishonest brewers. The Indians are said to intoxicate and kill fish by means of the berries when green.

COCCYX. The name given to the last bone or two of the vertebral column in the human subject, so called from its resemblance to a cuckoo's beak. It consists of two small bones, and is in some slight degree moveable. In the lower animals it is composed of many pieces, and forms the tail.

COCOA, OR CACAO. *See* CHOCOLATE.

COCOA-NUT TREE. A tree which grows at Nicaragua, in Mexico, and also in Virginia and Jamaica. The nut is the only part of the tree used; its shape is nearly that of an almond, but of a much larger size. The shell is dark-coloured, brittle, and thin; the kernel throughout is of a brown colour. Cocoa nuts have a light agreeable smell, and an unctuous, bitterish, but not ungrateful taste. The principal use of the nut is to form the liquor called Chocolate. (PARR's *Medical Dictionary.*) *See* CHOCOLATE.

The large nut often brought to this country, and commonly known by the name of cocoa nut, is obtained in the East and West Indies from a species of the Palm tree, and has no analogy with the chocolate nut. *See* PALM.

COFFEE. The seeds of a plant, the *Coffea Arabica*, cultivated in Arabia, Persia, the Isle of Bourbon, the West Indies, and in some parts of America. The best comes from Mocha in Arabia. It possesses astringent qualities, and is of service when the digestion is weak. When drank warm within an hour after dinner, it is of great benefit to those who have headach from weakness of the stomach, brought on by sedentary habits and close application or occasional excess; and it enables such patients to digest certain articles of food, such as fat and oily matters, which they would probably be unable to do without such assistance. When drank too soon after port wine, it often produces a disagreeable acidity in the stomach. Like tea, it has the effect of keeping a person awake; but any inconvenience of this kind may be prevented by taking it several hours before bed-time. It is thought to counteract the effects of narcotic substances; and hence is much used in Turkey, to prevent the injurious consequences of the opium which its inhabitants use. A strong infusion of the best

Mocha coffee, newly burnt and made very strong, has been found of service in spasmodic asthma; it should be drank very warm, and without milk or sugar, and repeated at the interval of half an hour or less. Its effects in rendering the bowels slow are probably very little to be regarded; indeed it has been known in many instances to prove a quick and easy laxative. Where coffee is directed as a promoter of digestion, it should be carefully made by infusion, as boiling dissipates its fine aromatic taste.

COFFEE has been imitated by the roasting of a great variety of grains. That made from rye comes the nearest to real coffee. This was long ago ascertained; and a spurious coffee made of rye, has been for some time sold under the name of Hunt's economical breakfast powder.

COHESION. The force by which the particles of homogeneous bodies are united together.

COLCHESTER WATERS. A mineral water of the bitter kind, similar to the Epsom water, but not so strong.

COLCHICUM AUTUMNALE, *Meadow Saffron.* A perennial, bulbous-rooted plant, which grows in wet meadows. The bulbs are used in medicine. The best time for gathering them is from the beginning of June till the middle of August. When recent, they have scarcely any odour; but their taste is bitter, hot, and acrid. A saturated vinous infusion is made, by macerating an ounce and a half of the dried bulb in twelve ounces of white wine; and this vinous infusion has been, on the recommendation of Sir Everard Home, much used in gout; in which disease it is said to be almost a specific, as it very rarely fails to break up the paroxysm, sometimes acting on the bowels, at other times on the kidneys and skin, and often without any apparent accompanying effect. The dose is sixty drops, at bed-time, when the paroxysms of pain are violent. The celebrated specific for gout, known by the name of *Eau Medicinale d'Husson*, is said to be the vinous infusion of colchicum. It is but right to state, that the most judicious writers on gout consider all these specifics as ultimately dangerous. Colchicum is a valuable remedy in rheumatism, when the inflammatory state has been moderated by bleeding. Five grains of the powdered root are to be taken three times a-day; or from one to two drachms of the wine in cinnamon water, with a scruple of the carbonate of magnesia. An infusion or tincture of the seeds is found to have the same virtues as that of the bulb.

COLD, in natural philosophy, means the diminution or abstraction of heat. In physiology and the theory of physic, it signifies the effects produced in the body by the abstraction of heat, or the application of cold to the surface. It is to be observed, that many applications of cold to the body are productive of much greater effects than would be expected from the degree indicated by the thermometer. Much of the effect of cold on the body depends on the degree of temperature to which it is previously raised, and especially on the circumstance of the cold checking the perspiration. Cold, when very intense and when long applied, may destroy the vital action of parts of the body, or may extinguish the life of the whole system. When a part of the body is frost-bitten, it is a very pernicious practice to bring it near a fire; a safer way of proceeding, is to rub it with ice or snow, and thus very gradually to restore the action of the part. Persons on whom the cold is beginning to make a dangerous impression, are seized with a very strong propensity to sleep; and if they are allowed to indulge in this, their lives will infallibly be destroyed. "The effect of low temperature," says Dr. Kellie, "on the nervous system, in producing a torpid and lethargic state in certain circumstances of exposure to a cold atmosphere, is familiarly known by many recorded instances; and the progressive symptoms of this short but fatal disease, if we may so call it, appear to be weariness and faintness, debility, languor, lassitude, torpor, irresistible drowsiness, lethargy, profound

coma, and death. *(Edinburgh Medico-Chirurgical Transactions.)* Such may be called the *sedative* effects of cold.

A less degree of cold acting on a healthy frame has a very contrary effect. Who has not felt the bracing, invigorating influence of a bright winter's day, and experienced the healthful glow in his frame, while the face of nature all around appears torpid and locked up in frost? Contrast the listless apathy of the Indian verandah, with the bustling fervid activity on the hard-frozen northern lake. When the constitution is vigorous enough to obtain the advantages resulting from these *stimulant* and *tonic* effects of cold, there cannot be a better means of preserving the health and agility of the system.

Power of COLD *to induce disease.* There is not a more frequent exciter of illness than cold, when applied to the body in certain circumstances. Were we to enumerate all the diseases to which cold gives rise, we should give a list of all those to which, in our variable climate, the human body is subjected. The numerous inflammations of various parts, as the eyes, the throat, the chest, the lungs, the bowels; the inflammation of tendinous and membranous parts, constituting rheumatism; catarrh, called by way of eminence, *a cold;* the rose, fevers of various kinds, consumption; these and many more, closely follow the application of cold; and whatever may be the distinction we make between pre-disposing and exciting causes, the plain, practical inference to be drawn, is the necessity of guarding against cold, and all those circumstances in its application on which depends its power of affecting the body with disease.

The circumstances which give to cold the power of producing bad effects on the body, are: 1. Its degree and intensity: a certain degree of it will either produce gangrene or mortification of a part of the body, or death of the whole. 2. The length of time during which it is applied: a transient exposure will do comparatively little harm; but long exposure is highly dangerous, as when a person has lost his way on a winter night. 3. When cold is applied with moisture. This is by far the most pernicious way in which cold can be applied. Hence the numerous ailments arising from damp clothes, wet feet, wet bed-clothes, and the like; and the numerous sore throats, rheumatisms, &c. that follow such exposure. 4. Cold is very hurtful when applied in a stream or current of air; hence the impropriety of sitting near an open window, and the danger of cross currents of air in hot rooms and crowded assemblies. 5. One of the circumstances most hurtful about the application of cold, is its being a sudden change of temperature from heat to cold. Hence the frequent colds and pleurisies that occur, when cold suddenly comes after hot and moist weather; and hence the numerous illnesses which assail those who leave warm and crowded public places, to be exposed to the sharp air of a frosty night. Hence the fair votaries of pleasure and dissipation so often fall a sacrifice to the destructive pursuit; and hence the sorrow for many a lovely youth, who on leaving the dance, receives the chilling blast that proves to be the call to an early tomb.

There are certain circumstances in the constitution itself, which render it very liable to be affected with cold. 1. Weakness and diminished vigour of the circulation by previous disease, by evacuations, by intense care or study, by intemperance in living, by drunkenness, by fatigue. All such as are weakened by any of these debilitating causes, are more easily brought into a state of disease by cold than others are. 2. When any part of the usual coverings of the body is awanting, a person is more easily affected with cold. Thus a great many complaints are brought on, when a person accustomed to wear a flannel shirt happens to leave it off even for a very short period, or when a thinner dress is used, or when the bed-clothes are thrown off without being replaced quickly; and even from the want of a night-cap, bad consequences often follow. 3. It is bad, when one part of the body is ex-

posed to cold while the rest is kept in its usual state, or warmer.

The circumstances which enable the human body to resist the morbific effects of cold, are a certain vigour of constitution, exercise, activity of mind, and the being occupied with some exciting passion. Cordials also, as wine, spirits, or other stimulants, prevent the body from suffering by the effects of cold; but it is to be noted, that those who are in the habit of dram-drinking, are not those who are best able to resist the action of cold. The temporary stimulus of spirituous liquors is very often succeeded by great weakness, and susceptibility to external impressions; and the unhappy drunkard, from the combined effects of his debility and exposure, too frequently ends his days, overcome by the sedative effects of cold. Cold is applied as a useful agent in the preservation of health and the cure of disease, as in the use of the cold bath, either general or local. *See* BATH, COLD.

COLD. A disease. *See* CATARRH.

COLD AFFUSION. *See* AFFUSION.

COLD BATH. *See* BATH.

COLIC. A painful sensation spreading over the belly, and accompanied by a feeling of twisting or wringing at the navel. It is owing to spasms acting on the intestines themselves; and very frequently the skin and muscles of the belly are also drawn inwards and spasmodically contracted. These pains are very violent and permanent, unlike the transient gripings that occur in other affections of the bowels; and costiveness is a general attendant. Vomiting is also present; any thing taken in by the mouth is apt to be rejected, and bile is thrown up. Colic occurs in many instances without any fever; but in the time of the more violent paroxysms, the pulse may be quickened and the face flushed; and by long continuance of the spasms, some degree of inflammation may be brought on; but colic is different in its symptoms from inflammation of the bowels. *See* BOWELS, *Inflammation of.*

Causes. The causes of colic are various. It may arise from cold, from flatulence, from mechanical obstruction, from acrid matters taken into the stomach, from accumulation of fæces after long costiveness: it may also arise from passions of the mind.

Treatment. When colic occurs in a strong healthy person, and when the pain is very constant and severe, it is a good practice to employ blood-letting very early; both with a view to prevent inflammation from coming on, and to produce a relaxing or antispasmodic effect. Our next object is to remove the spasms of the intestines and of the belly. Opium is our great and efficacious remover of spasms; but in colic, its use is not without danger, as it has the effect of diminishing the action of the bowels, and so may contribute to retain the offending matter, from which colic often arises. Still as the pain is so severe, it is difficult to abstain from this soothing drug; and if we follow up its use with other prudent measures, we may venture to exhibit it. On account of the vomiting, it must be given in a small bulk; as the tincture with little addition of other fluids, or the pill in the usual dose of one grain or two. The application of warm fomentations to the belly, by means of bottles or bladders filled with hot water, or flannels wrung out of hot water, is to be diligently used; and where it can be conveniently done, the warm bath should be had recourse to. Should these means not succeed, a large blister must be applied over the abdomen. The administration of purgative medicines forms an essential part of the treatment of colic. While the vomiting continues, it is not easy to get them retained on the stomach, so as to pass into the intestines, and we must therefore early employ clysters; these, at first, should be of a mild kind, as the common gruel or hot water injection, with the addition of a little oil; or we may add a little common salt, or Epsom salt, or an infusion of senna. These injections, when given in sufficient bulk, often act as internal fomentations, and excite the bowels to a regular action; by which they are enabled to dis-

charge their contents, and relieve the disease; but they are also too often found insufficient; and until we empty the bowels by purgatives given by the mouth, we cannot flatter ourselves that the disease is removed. The more acrid purgatives are to be avoided, as they are apt to be thrown up; and may do harm by exciting inflammation, if they do not remove the obstruction. The oily purgatives seem the most proper in colic. A dose of castor oil given in a basin of weak chicken broth, or warm gruel, appears a kindly medicine in such cases. To some stomachs, mutton broth, made of very fat meat, proves purgative. If the neutral salts are to be given, they must be largely diluted; cream of tartar, in a considerable quantity of warm water, answers as well as any of them. There are few purgatives more effectual than jalap; and either by itself, or mixed with cream of tartar, as in the compound powder of jalap, it is one of the best and safest that can be given. The dose of jalap alone is from ten to fifteen or twenty grains, and of the compound powder of jalap, the dose is one drachm. This last generally opens the bowels very easily, quickly, and effectually; it may be given in beer, tea, gruel, or any convenient liquid. As calomel operates in small bulk, a pretty large dose of it may be given, from five to twelve grains, in the form of a pill or with a little syrup. When we have succeeded in procuring a full discharge by the bowels, if there is still a tendency to the return of the pain, opiates may be used with more safety than at first. The tincture or extract of henbane, though not nearly so much to be relied on as opium, is a good auxiliary where there are reasons against the free use of opium. The dose is from five to ten grains of the extract, or a drachm of the tincture of henbane. After an attack of colic, much attention must be paid for some time to what the patient uses for food and drink; he must avoid high dressed or difficultly digested dishes, and abstain from beer and other fermented liquors.

COLIC IN INFANTS. A child is known to be affected with colic, when he has frequent fits of fretfulness, a bluish appearance of the upper lip, with startings of the body; and if he draws up his limbs towards the belly. A discharge of wind is another symptom of colic pains. In more violent degrees of this complaint, there is excessive and long continued shrieking, fever, heat of skin, flushing of the face; the breathing is oppressed, and slight pressure in the belly occasions pain.

Causes. The great delicacy of the bowels of infants renders them liable to be deranged by very slight causes. Too much spoon meat, exposure to cold, allowing the infant to be too long wet, bad milk, too much sugar, all occasion colic in infants.

Treatment. In slighter cases, a teaspoonful of castor oil, or a little sugar of anise mixed with the food, or a drop or two of peppermint water, or Dalby's carminative, may be given; and all spirits must be carefully avoided. In more severe cases, the child is to be put into the warm bath, and the belly is to be fomented; proper doses of castor oil, or of magnesia and rhubarb are to be prescribed. If the bowels be quite open, opiates may be rubbed on the belly; and with much caution, and under the direction of a prudent practitioner, a very small portion of tincture of opium may be given internally. When costiveness attends colic, very active purgatives are required, even with young children, as senna, extract of colocynth, or aloes; and emollient or purging clysters may be combined as auxiliaries.

COLICA PICTONUM. *See* DRY BELLY-ACHE.

COLLAPSE. A term proposed by Dr. Cullen to signify that state of the brain, whatever it is, which is indicated by a diminished activity of the functions believed to be immediately dependent on it. Thus fainting, lassitude after fatigue or intemperance, and the imperfect exercise of the mental faculties in dreaming or low delirium, are considered as proofs of

collapse, or diminished energy of the brain.

COLLIQUATIVE. Wasting or emaciating; applied to the diarrhœa or looseness so commonly attending the last stages of consumption.

COLLYRIUM. An application used in diseases of the eyes, commonly either astringent or stimulant.

COLOCYNTH, *Cucumis Colocynthis*, the coloquintada or bitter purging apple. It is an annual plant of the gourd kind, a native of Turkey and Nubia. The fruit is about the size of an orange; the part used in medicine is the pulp, freed from its rind and seeds. It is very light and spongy, almost entirely soluble in water, forming an intensely bitter solution, which, when evaporated, forms the extract of colocynth of the London pharmacopœia. Colocynth is a very powerful and violent cathartic; producing in an over-dose, inflammation of the bowels, bloody stools, and other untoward symptoms. It is seldom used alone. The compound extract of colocynth is a good combination of it with other purgatives, viz. aloes and scammony, and it may be given either alone or combined with calomel. From five to ten grains seldom fail to clear the bowels in two or three copious evacuations. Six grains of the compound extract, with four grains of calomel, will have the like effect. In the Edinburgh pharmacopœia, we have most useful purgative pills, composed of aloes, scammony, and colocynth, known in the shops by the name of colocynth pills, or pills of aloes and colocynth; the dose of which is two pills or three, at bed-time.

COLOMBO. Sometimes called Calumba, is the root of a plant yet undescribed. It is said to be produced in Africa, in the country of the Caffres, and sent to Mozambique, from whence it is imported into Europe in bags and cases. It is usually brought in slices, from half an inch to three inches in diameter, having a thick yellow bark. It is very often brought to this country worm-eaten and decayed, but it should be selected as little so as possible. Its smell is slightly aromatic, its taste is strong bitter, and slightly pungent. It is used in medicine as a bitter, and it in general sits well enough even on delicate stomachs. A weak infusion is a good form of exhibiting it, and it may be conjoined with aromatics. In this form it is used in stomach complaints, looseness of the bowels, and to restore the tone of the bowels and of the system in general, after an attack of cholera morbus. The powder of colombo is also a very useful form of administering the medicine; from five to fifteen or twenty grains of the powdered root may be taken three times a day. The tincture is given in the dose of from one drachm to three; and its use is to be continued for some time, like other tonics and bitters.

COLON. The name of one of the portions of the large intestines.

COLTSFOOT, *Tussilago Farfara*, a plant growing wild in moist situations. The flowers are yellow, the leaves large and roundish. The expressed juice and the decoction of the leaves has been recommended in cough, consumption, and other disorders of the breast and lungs; but it has no efficacy, and no claim to be retained in the list of the materia medica. There is a quack medicine sold under the name of Essence of Coltsfoot, which, according to Dr. Paris, is a solution of Balsam of Tolu, in compound tincture of benzoin and spirit of wine. According to the venders, it is an infallible remedy in all coughs; but it is in reality calculated to do infinite mischief, in the disorders for which the ignorant and credulous employ it.

COMA. A drowsiness or very deep sleep; a common circumstance in apoplexy, and other affections of the head.

COMATOSE. In the state of drowsiness or insensibility.

COMBUSTION. The assemblage and series of phenomena which take place during the burning of certain bodies. A substance is not said to be combustible when it merely acquires heat by any means, and parts with it unchanged; but

a combustible body is one which, when its temperature is raised to a certain degree, becomes hotter itself, emits a great quantity of light and heat, which continues some time, and then diminishes and ceases; after which the combustible body is found to have undergone a complete change, to be converted into different matter, and to be no longer capable of being burned. Combustion is a phenomenon extremely interesting, on account of its frequency, its utility, and the important substances which result from it. The explanation of the phenomena of combustion was for many years attempted in vain; one theory was supplanted by another, till the genius of Lavoisier, combining the various discoveries of modern chemistry, succeeded in giving an explanation more satisfactory than any which had preceded him, and made a total revolution in chemical science. According to Lavoisier, combustion consists of a decomposition and a combination. The oxygen of the atmosphere, being in the state of gas, is combined with light and heat. This gas is decomposed during combustion; the oxygen gas combines with the burning body, and light and heat are extricated. The product cannot burn, because its base being already saturated with oxygen, can combine with no more. The theory explains well the combination of the burning body with oxygen, but is less happy in accounting for the light and heat. Oxygen combines with several bodies, without any extrication of light and heat; it is thus that it combines with azote and with mercury. A later explanation of this phenomenon is as follows: Relatively to combustion, all bodies may be divided into three classes, supporters of combustion, combustibles, and incombustibles. Supporters of combustion are substances whose presence is absolutely necessary, in order that combustion may take place. Dr. Thomson is inclined to believe that the supporters of combustion contain heat, because the heat which is evolved during combustion, is always greatest when the quantity of supporter which combines with the burning body is greatest. He also thinks it probable, that light constitutes a component part of all combustible substances; because the quantity and colour of the light which appears during combustion, always depends on the substance burned. If we suppose that the supporters contain heat as a component part, while combustibles contain light, we should explain combustion to be a double decomposition; the caloric and light would combine and escape, while the other ingredients would remain as the product. Thus, when sulphur is burnt in oxygen gas, the light in the sulphur unites to the heat of the oxygen gas, and the two escape in the form of fire, while the oxygen unites to the sulphur, and the product is sulphuric acid.

COMMISSURE. An anatomical term, signifying a joining. Certain parts of the brain which go across and join one hemisphere to another, are called *commissures;* and the joining of the lips at their corners also obtains that name.

COMPARATIVE ANATOMY. The dissection, delineation, and description of the lower animals of all kinds, as compared with the anatomy of the human species.

COMPRESSION OF THE BRAIN. *See* BRAIN.

CONCEPTION. The impregnation of females, or the commencement of that internal process in the ovarium, uterus, and its appendages, by which the young animal begins to be formed. The symptoms which in many constitutions lead us to believe that conception has taken place, are great irritability of the whole system, particularly of the stomach. There is frequent sickness, especially in the morning, and sometimes during a great part of the day. In some women, there is great disturbance of the nervous system, as shown by peevishness, and capricious and irregular longings for various strange articles of food. *See* PREGNANCY.

CONCOCTION. The term formerly applied to certain periods of the function of digestion.

CONCUSSION OF THE BRAIN. *See* BRAIN.

CONDIMENTS, or seasonings, are those substances which, though not nutritive themselves, are taken into the stomach along with the food, to promote its digestion, and to correct any injurious properties it may possess. Some such assistance is necessary to all animals; and the lower animals instinctively seek after bitters, salt, &c. to take with their food. Condiments are of various kinds, as salt, acids, aromatics, oils. Some of those in most frequent use are, sea-salt, vinegar, lemon juice, pepper, cinnamon, nutmegs, cloves, ginger, parsley, garlick, onions, leeks, horse-radish, mustard. A small proportion of these condiments may be used with propriety, especially by the feeble natives of the warm climates, where pepper, nutmeg, and other spices grow; because they live chiefly on rice and other vegetables; but they must be injurious to the stomachs of those who indulge in the constant use of much animal food, while the fundamental article is disguised, under a hot and fiery load of cayenne pepper. This furnishes a temptation and a pretext for drunkenness; and the pepper and brandy reciprocally recommend each other; and ultimately occasion organic disease of the stomach or liver, and permanent injury of the digestive functions. Oils and butter are also to be regarded as condiments, and their use ought to be sparing. The wine which is drank during dinner is to be regarded as a condiment. *See* DIET.

CONDYLE. The rounded eminence of a bone which forms part of a joint.

CONDYLOMA. A small hard tumour, or excrescence about the anus. Such tumours may be removed by caustic, or by tying a ligature round their base, or they may be cut off with the knife; this is the best and speediest method.

CONFECTION. A pharmaceutical preparation made up with sugar. In the London pharmacopœia, this term includes conserves and electuaries. In this shape, are principally given the milder alterative medicines, and such as are not disagreeable to the taste. The dose of each kind of electuary shall be stated under its proper head.

CONFECTIO AROMATICA is made of cinnamon, cloves, nutmegs, and cardamon seeds as aromatics, with water, chalk, and refined sugar. It is usefully given diffused in draughts or mixtures, in the dose of from twenty grains to a drachm. It is generally agreeable to the stomach, relieving flatulence and sickness, and sometimes checking obstinate vomiting.

CONFECTIO OPIATA is made of opium, long pepper, ginger root, caraway seeds, tragacanth and syrup. Thirty-six grains of the confection contain about one grain of opium. It is useful in checking diarrhœa, and in some forms of rheumatism and gout. From ten grains to one drachm are given, diffused through chalk mixture, camphor mixture, or any of the aromatic waters.

CONFLUENT SMALL-POX. That form of the disease where the pustules are numerous, and run into one another, generally marking a severe and dangerous kind of the malady. *See* SMALL-POX.

CONFORMATION. The state or form of any part, considered as a portion of an organized or complicated system.

CONGELATION. The passing of a body from the fluid to the solid state, ascertained by modern chemistry to be owing to the extrication of latent heat. Congelation as applied to water, is termed freezing.

CONGESTION. A heaping together, or gathering into one place. This word is much used in modern pathology, to signify an accumulation of blood in the veins, as tending to produce disease; or an undue afflux of fluids to any organ, producing a diseased alteration in its structure or functions. Thus when the blood is repelled from the surface of the body, it may accumulate or be congested in the veins, giving rise to fever; if the blood flow in too greaf quantity to the head, it may produce apoplexy by pressure or by extravasation; and when the

blood is too copiously sent to the liver, chronic inflammation of it, or derangement of the digestive organs is the consequence.

CONGLOBATE GLAND. A round gland, formed of a collection of lymphatic vessels, connected by cellular substance, having no cavity nor excretory duct. The glands in the groin, arm-pit, and mesentery, are of this description.

CONGLOMERATE GLAND. A gland composed of a number of others, brought together like a clue, whose discharging ducts all unite into one common duct; such are the glands that secrete the saliva, also the pancreas, and the lacteal glands of the female breast which secrete the milk.

CONSERVE. A composition of recent vegetable matters and sugar, beaten together into a uniform mass. Conserves are chiefly considered as auxiliaries to medicines of greater activity, or they are used as a medium for joining such medicines together. They are useful for giving the heavy powders, as calomel, oxides of iron, or other mineral preparations. The principal conserves now retained are the conserve of orange peel, of roses, and of dog-hips.

CONSTIPATION. *See* COSTIVENESS.

CONSUMPTION, *Phthisis.* A wasting or decaying of any part, now generally used without any addition in English, to signify the wasting of the lungs. No disease can be an object of more painful attention than this, the great scourge of our island, and the destroyer of the most interesting part of the species. Many diseases commit their ravages indiscriminately on all ages, or dismiss from this mortal scene those who are advanced in life; but consumption is found to select its victims from the young and beautiful, from those who have prepared themselves for the business of life, and whose apparently healthy and blooming countenances seemed to warrant their indulging the hope of long and vigorous maturity. "Consumption, with the diseases resembling it, is one of the most interesting subjects that can occupy the attention of the British practitioner; and his utmost exertions will be amply rewarded, if any degree of precision can be introduced into its pathology. At present it is certainly vague and unsatisfactory in the greatest degree, while in the British islands alone, the annual mortality from consumptive diseases is from fifty-five to sixty thousand." (DR. ABERCROMBIE.)

Symptoms and Progress of CONSUMPTION. When a person spits up a great quantity of purulent matter, when he is affected with hectic fever, and becomes extremely emaciated; these are evident and almost unequivocal symptoms of consumption of the lungs. But these symptoms are only the sequel of a long train of others, of which it may be proper to give the detail; premising that many of them may be parts of other diseases, and many may show themselves without being followed by the plain and aggravated marks of confirmed and fatal consumption. There are certain habits of body, that appear more liable to consumption than others. Persons of a slender make, of long necks, narrow chests, and prominent shoulders; with a florid countenance and sanguine temperament, are those particularly referred to. Instead of general descriptions, let us take a single patient, and trace the progress of the disease in him. He is affected with a slight and short cough, which becomes habitual to him, which he does not remark in himself, nor like to hear taken notice of by others. His breathing is easily hurried by any bodily motion, he becomes languid and indisposed for exertion, and also, in some degree, emaciated. This state continues for a year, or more, without his making much complaint about it; but he is more easily affected by cold than formerly, his cough is increased by it, and he has some affection of the head, nose, and eyes, as if from catarrh. This may be relieved; the patient and his friends believe he has had a common cold; and little or no alarm is excited, or precautions taken. At length, a cold appears to have been taken, of more than usual severity,

the cough is more troublesome than before, and continues longer than a common cold generally does. The cough had formerly been dry; now it becomes more constant, and there is some expectoration, which is most considerable in the mornings. This becomes, by degrees, more copious, thick, and tough; at length of a greenish or yellow colour, and puts on the appearance of purulent matter. When these symptoms have come on, the breathing is at the same time more difficult, and the debility and wasting are increased. At this time, also, there come on the symptoms of hectic fever; of which it may be proper, in this place, to give the description, although hectic fever is the accompaniment of other diseases besides consumption of the lungs. A hectic fever, though the febrile symptoms are always present, has exacerbations, or an increase of their severity twice every day. The first of these occurs about noon, sometimes a little sooner or later: a slight remission happens about five in the afternoon. This is followed by another exacerbation, generally increasing till after midnight; but after two in the morning a remission takes place, and this remission becomes more complete as the morning advances. Sometimes these exacerbations are introduced by a degree of cold shivering, or a sensation of cold; though the patient's skin, if examined by the thermometer, would show an actual increase of heat. The evening exacerbation is the most considerable; and after no long period, it is accompanied by sweating, which continues through the whole course of the disease, and becomes more and more profuse as it advances. The time of its most distressing and harassing flow is between two and four in the morning. The appetite for food is less impaired in hectic than in some other kinds of fever; but any approach to indulgence, is apt to make the exacerbation more severe. The thirst is not great, and the mouth is commonly moist; as the disease advances, the tongue is free of fur, and even appears raw; and towards the very termination, the surface of the mouth, tongue, and fauces appears red and inflamed, and covered with white and curdy looking specks, like the most painful form of the thrush in children. The face is commonly pale; but at certain times, chiefly during the exacerbations, there is a flush, and a bright red spot on each cheek. There is a peculiarly blue or pearly whiteness about the white of the eye. A looseness comes on, which baffles all the attempts of art to check it. The weakness of the system is great and increasing, and the wasting is carried to an extent that is almost incredible. Patients have been seen whose countenance looked more ghastly and cadaverous when breathing, than it did when life was extinct. Sometimes watery swellings occur in the feet and legs. The fever is not often attended with headach and delirium; and the state of the mental faculties is one of the most striking and characteristical features of hectic fever, and especially of that disease of which it is the unfailing attendant, pulmonary consumption. While every spectator sees the evident and resistless approach of death, the patient himself is, in many cases, confident and full of hope; and while judicious and pious friends wish to direct the mind to what alone can make the future desirable, they often find the patient devising favourite schemes for the promotion of his recovery, and for distant visionary happiness. Sometimes the elegant and cultivated genius shines out with more than usual brightness, as life goes down; and bequeaths to after times, some of the most delicate effusions of the pensive Muse. Sometimes, in more dignified elevation, the soul, looking calmly down on the early wreck of its frail tenement, and, triumphant amidst deploring friends, gives a glimpse of what is to be enjoyed, when its capacities of understanding and affection are satisfied to their fullest extent.

While the symptoms of consumption already described, the cough, expectoration and fever, are going on, there is

generally some pain felt in some part of the chest. At first, this pain is felt under the breast bone, and chiefly or solely on coughing; but very often a pain is felt in some part of the side, and to such an extent as to prevent the patient's lying on that side. These symptoms, pretty nearly in the succession above described, though varying a little in their continuance and degrees of severity, occupy more or less time before they come to their fatal termination. In this climate they often take up some years, the symptoms appearing especially in the winter and spring: in the warm weather of summer, they are mitigated or nearly removed; but on the return of winter, they again appear; and after a season or two prove fatal, towards the end of spring or beginning of summer.

Causes of CONSUMPTION. There are several diseases of the organs contained in the cavity of the chest, which are found to terminate in consumption. A spitting of blood, a common cold, inflammation of the lungs or of some of their coverings, asthma, all have been thought to be the cause of that fatal ulceration of the lungs, which destroys their structure, and the life of the patient. Most of the above-mentioned diseases are frequently seen, and are frequently cured, without consumption taking place; but it is unquestionably true, that a spitting of blood in young persons is always to be dreaded, as it is too often the first indication of consumption. At the same time, it is also to be remembered, that a spitting of blood is a mark of inflammatory action, that it often yields to judicious employment of bleeding and the antiphlogistic regimen, and though never to be neglected, it need not inspire the patient or his friends with over-anxiety or alarm. It is the same with the other diseases mentioned; they are never to be trifled with or neglected; the most prudent methods are to be taken for their removal, remembering the insidious nature of the first symptoms of consumption, and the fatal progress which it makes when once it is begun. It is generally agreed by medical men, that by far the most frequent subjects of consumption are those who have tubercles in the lungs. By tubercles we mean certain small hard swellings in the lungs: these are inactive at first, but at length become inflamed, and change into little abscesses, which break and pour out their matter, and give occasion to purulent expectoration. It may now be asked, Who have tuberculous lungs; and how are we to know or suspect the presence of tubercles? It is admitted that persons of a scrofulous habit are those who are most frequently attacked with consumption from tubercles; or that it occurs most in those who are affected with swellings of the external glands, viz. persons of a sanguine temperament, or of a temperament compounded of the sanguine and melancholic, who have smooth fine skins, ruddy complexion, large veins, and soft flesh. Another question of great anxiety is, Are we able to distinguish, by the matter spit up, whether the lungs are in an ulcerated state or not? Different tests have been proposed to ascertain the difference between mucus and pus, but few of these tests can be depended upon; and very accurate chemists and physiologists have confessed, that the matter expectorated in a common cold is, in some of its stages, precisely the same as from wasting lungs; and that the most formidable looking matter has in a few days been exchanged for an improving expectoration, and at last perfect health has been restored. It is from other circumstances than the expectoration, that we are to judge whether the patient is affected with consumption or not. This is a subject attended with very great difficulty indeed, as several diseases of organs within the chest, and foreign bodies getting into the lungs may give rise to all the symptoms of incurable ulceration of the lungs, which symptoms may yet get well. In a case of diagnosis, which baffles the most skilful and experienced physicians themselves to understand, or to communicate to their own profession any satisfactory marks of

distinction, it would be idle and pernicious to pretend to put the general reader in possession of any tests which could be popularly understood. The diseases resembling consumption, from which patients have sometimes recovered, are the following: Sympathetic cough; irritation of the diaphragm by diseases of the liver, inflammation of the wind-pipe, diseases in certain parts of the lungs themselves, or of their glands and coverings, ulceration in consequence of active inflammation, spitting of blood, and its consequences.

Treatment of those who are supposed liable to CONSUMPTION. This has varied much in different periods; sometimes it has been treated on the stimulant and tonic plan; sometimes with exercise; sometimes on the antiphlogistic plan; and a multitude of remedies have been for a time extolled, and then laid aside and forgotten. Those who are of the habit and make described in a former part of this article, or whose parents or relatives have either died of consumption, or who are evidently disposed to it, should pay particular attention to the slightest appearance of the symptoms which threaten the disease, and should take every method for their removal. In such persons, we ought never to hear it negligently remarked, when they are affected with cough, Oh, it is only a common cold: this is too often the commencement of the long train of illness which is to lead them to the grave. A spitting of blood is never to be trifled with; if florid and frothy, it is to be treated by blood-letting and other antiphlogistic means; and all richness of living, and every thing tending to keep up too great fulness of blood, or to increase inflammatory action in the system, must be avoided for years after the spitting of blood appears. But the common forerunner of fatal consumption is the tuberculous disease; and to prevent the formation of tubercles, to discuss or dissolve them when formed, or to prevent them from getting into a state of inflammation, or to heal them up when suppurated, are the great *desiderata* in this disease. But the means of satisfying these indications are by no means easily found. After the long observation of this disease, from Hippocrates to the present day, and although tens of thousands are every year cut off in Britain alone by this terrible malady, we have not yet succeeded in finding a method accurately to know the existence of tubercles, or to treat them safely when we know them to be formed. One of the first objects to be attended to, is to regulate the diet of consumptive persons; little animal food is to be used, and a great part of the patient's living is to consist of milk, in its various forms preparations, and combinations. Ass's milk has long been popular in the treatment of consumption, from its containing much nutritious and easily digestible matter. Care must be taken by such persons also, that no undue stress be given to the lungs or to the cavity of the chest; and, therefore every thing must be avoided, which requires strong exertion of the organs of breathing, such as violent or long continued exercise, walking quickly up steep ground: loud or long speaking, or singing, must be avoided; the person should not play on the flute or other wind instruments, and if he has been in the practice of speaking in public, it must be abstained from. An employment that requires much stooping is bad for those threatened with consumption; they must, therefore, give up those sedentary occupations which demand stooping at a desk or counter. A point of primary importance in the management of those who are of the consumptive habit, is the avoiding of exposure to cold; in numberless instances this exposure is to be considered as the exciting cause of the disease. In our cold and variable climate, it is not easy for the most robust and cautious persons to pass a winter without some catarrhal affection; and for the phthisical, who are so much susceptible of all impressions from the atmosphere, it is almost impossible to avoid it. Hence the necessity of preventing as much as possible all changes of temperature from injuring the body, by the use

of flannel or fleecy hosiery worn next the skin; or what is still more approved, an under jacket of chamois leather. Hence, also the propriety of removing to a warmer climate, and avoiding the cold and humid air of a northern winter. For consumptive patients, there are several places recommended as very salubrious. Madeira is an excellent place, but with the disadvantage of its not having good conveniences for walking. In the south of France, and in Italy, there are various places of resort. In England, the coast of Cornwall and Devonshire has a very fine equable temperature, and many patients have been much benefited by a residence there. Clifton, near Bristol, is also much resorted to. *See* CLIMATE, *and the places there referred to.*

Gestation of various kinds has been much recommended; and as to the advantage derived from one kind, viz. riding, there is a testimony from Sydenham so strong, that it deserves to be quoted for its singularity. "Neither mercury in syphilis, nor bark in intermittents, is more effectual than riding in consumption; provided the patient takes care to have his linen well aired, and to continue his journey long enough; the longer as he is more advanced in life." Concerning such a testimony from such a man, so accurate an observer, and so candid a relater of what he saw, we must say that it is by far too strongly expressed; and must add gestation to the long list of consumptive remedies, which have deceived the hopes of both patients and physicians. Without expecting so much from riding as Sydenham did, we may still hold it as true, that riding is a proper and safe exercise, to be tried before patients are too weak to be the better for it; and that many have had their complaints much alleviated, and it would seem even cured by the practice. Riding in a carriage, or using a swing, are also modes of gestation which may be conveniently resorted to; and a long established practice is to order patients to take a sea voyage. One would naturally prefer doing this in the summer season, and recommend going from a colder to a warmer climate. With a view of relieving the lungs, blisters have been recommended; and an issue in some part of the body may be of use. Such are the measures to be employed in cases where we apprehend a future consumption; and in the children of consumptive parents, and in young persons who have had spitting of blood, or who seem by their nature and habit likely to fall into the disease, they should be early, and diligently, and unremittingly employed.

Treatment of CONSUMPTION *in its latter stages.* When we are unsuccessful in preventing the advanced stages of the disease, and the expectoration of matter, and when hectic fever is confirmed, it is the part of a humane and skilful practitioner to palliate the predominant symptoms as well as he can. We are unhappily as yet without any medicine which we know to have the power of curing ulcers in the lungs; such as have been recommended for this purpose, are certain gums and balsams, which, by their heating qualities, are more likely to add to the evil than to remove it. A mixture, containing myrrh, has obtained some reputation, and is at least as innocent as other medicines of the same class. To allay the heat, the thirst, and other symptoms of hectic fever, and to cool the system, acids are usefully employed. We give from ten to twenty drops of the elixir of vitriol in a glassful of water, three or four times a-day, or we may acidulate the patient's drink with very diluted sulphuric acid: or lemonade may be given, provided it does not produce too great laxity of the bowels, or sourness of stomach. When there occur acute pains referred to some part of the chest, when the skin is hot and dry, and the pains increased by drawing a full breath, then, notwithstanding the apparent weakness of the patient, it will be quite necessary to take away a little blood; and though the disease ultimately is to prove fatal, repeated small bleedings give great relief, and on the whole prolong the patient's life. In those circumstances too, repeat-

ed blisters are necessary; and it is better to allow them to heal quickly, and put them on afresh, than to keep up a discharge by an issue. Expectorant and emollient mixtures for the cough, are to be given through the whole course of the disease. These are made of squill as the active ingredient, joined with balsam of Tolu, syrup, and cinnamon-water, or peppermint-water; but large quantities, or many varieties of cough mixtures, as they are called, are unnecessary and improper. The cough is one of the most distressing and pertinacious of the symptoms of consumption; and for the relief of this, our great dependence is upon the various preparations of opium. Ten drops may be given twice or thrice a-day, and also after occasional fits of violent coughing; or thirty drops may be given at bed-time, in an ounce of any convenient vehicle; or a tea-spoonful of the paregoric elixir, in cold water at bed-time; or a proper quantity may be added to the squill or other expectorant mixture. There are some disadvantages in the use of opium; it has a tendency to induce costiveness, and to check the expectoration; to increase the feverish heat, and the already profuse perspiration; but the cough, the irritation, and the sleepless nights are the principal sources of pain and suffering; and as we have not a more soothing drug than opium, we must be content to use it with all its drawbacks, and counteract its injurious tendency by other means. Some practitioners prefer the exhibition of opium in the form of the Black Drop. This is made by boiling opium and some other substances in verjuice. One drop of this preparation is considered equal to about three of the tincture of opium. *See* OPIUM.

Another very troublesome symptom is the looseness of the bowels, which is both a cause and a sign of great debility; and which is with great difficulty checked or moderated; indeed in a great number of instances, is found to be beyond the reach of medicine. We attempt to moderate this symptom, by giving astringent medicines, as catechu, or decoctions of logwood, or small doses of rhubarb; also by giving opium by the mouth or by injections. The acetate of lead, combined with opium, in the dose of two grains of the acetate to one of the opium in the form of pill, given at bed-time, has in some instances the power of checking the looseness. The specks in the mouth are another annoying circumstance in the last stage of phthisis. They are to be treated in the mildest possible way, by very slight astringent applications, as a weak solution of a little honey and Armenian bole. It is difficult to abstain from attempting to counteract the helpless debility which forms so prominent a feature in consumption; but we must not, in general, venture on nourishing diet, or wine and other cordials, for fear of increasing the cough, the heat, the thirst, and other hectic symptoms. A decoction of quassia, made by boiling six drachms of the bark in two pounds of water, may be given; a wine-glassful three or four times a-day, adding eight drops of laudanum to each dose; and one or two grains of the sulphate of iron may be given daily with aromatic powder, or made into pills with crumb of bread.

It would be wrong to conclude this article, without mentioning the strong hopes that were at one time entertained, that consumption would be cured by the use of foxglove. It is certainly a medicine of very surprising powers, and has great influence on the circulating system; it diminishes the strength and frequency of the pulse in a most remarkable manner, and may be regarded as a most valuable assistant in lessening the violence of inflammatory action. It may be given with this view, when such action occurs in any stage of consumption, either alone in doses of ten drops in water three times a-day; or added to the expectorant mixtures in the proportion of one drachm to six ounces of the mixture, and a table-spoonful given four or five times a-day. But we are not to hope, that any great or permanent good will arise from the use of foxglove in advanced pulmonary consumption.

To the deeply interesting question—Can consumption ever be cured? we reply: That considering the fallacy attending much of our observations and reasonings on disease; considering that there are a variety of affections presenting symptoms not to be distinguished from those exhibited by true pulmonary consumption, which nevertheless get well; considering also that several patients, undoubtedly members of consumptive families, have by proper management been relieved of their ailments, and attained a long life, we should not be justified in giving the decided answer that consumption in every instance is incurable. But we must judge of every particular case by its own merits, must direct the most prudent precautions where the disease is only threatened; and aware of the melancholy results obtained in the experience of the most learned, sagacious, and candid physicians, we must not excite ill founded hopes, where we see the disease decidedly formed.

CONTAGION. The power by which a disease affecting one person, is propagated so as to cause the affection of another with a similar disease. We shall not very scrupulously make any distinction between *infection* and *contagion;* in strictness, contagion is applicable only to diseases communicated by contact; but in common language, and even in medical writings, the two terms are often used indiscriminately. Without entering into any long discussion whether such or such a disease is contagious or not, without discussing the ingenious arguments by which some writers have plausibly supported the doctrine of non-contagion, we shall endeavour simply to state, what long observation and unsophisticated good sense have impressed on the minds of mankind; and to recommend precautions which, whether diseases are contagious or not, are equally beneficial to the patient and to those who are in health. The following remarks are applicable chiefly to typhus fever and the plague. When patients are ill of typhus fever, there issue from their bodies certain poisonous effluvia, which being diffused through the air render the persons who are exposed to the breathing or contact of them, liable to the same disease. These effluvia attach themselves to various substances, to clothes, to bedding, to furniture; and such as receive the effluvia from these articles, are in like manner generally infected with the same disease. Wool, cotton, and fur, carry contagion to a great distance in a very concentrated state. Instances have been known, of persons being struck dead while opening a bale of cotton, which had come from a place infected with the plague. The following dreadful incident is related by Dr. Parr of Exeter, (*Medical Dictionary, Art. Contagion.*) "The last plague which infested the town in which we now write, arose from a traveller remarking to his companion, that in a former journey he had the plague in the room where they sat. 'In that corner,' said he, 'was a cupboard where the bandages were kept; it is now plastered, but they are probably there still.' He took the poker, broke down the plastering, and found them. The disease was soon disseminated, and extensively fatal." From the above statements, we see the necessity of thoroughly cleaning every thing connected with the house, and the bed and body-clothes of patients who have fever, and of burning every thing that cannot be completely cleaned; and the indispensable necessity of quarantine laws, judiciously made, and rigorously enforced.

These poisonous particles do not appear to be very widely diffused through the air, nor do they infect persons in an adjoining street, room, or house, unless they be exposed to the substances to which the effluvia adhere, or unless they come too near to the patient himself. Where one or more persons, ill of typhus fever, are kept in a small ill-aired apartment, when their clothes are not cleaned, and their discharges are not duly carried out, the poison acquires a most malignant virulence, and persons going near the apartment are almost sure to be infected.

It would appear that a healthy person, confined in an ill-ventilated and unwholesome apartment, generates a contagion of the most pernicious kind, which may infect others, though he himself is not ill of the disease. This was remarkably shown at the Old Bailey in 1750, when a culprit in good health was brought out for trial, and the effluvia from his body and clothes infected a number of persons in court, not fewer than forty.

Measures proper for preventing the propagation of CONTAGION. The precautions to be taken for preventing the communication of infectious fever are, to have the patient in as large and well aired a room as possible, to open the doors and windows frequently, and allow a complete current of air to pass through the apartment; to have no more furniture in the room than what is quite necessary, to change the patient's linen frequently, to remove all discharges as quickly as possible, and to pay the greatest attention to cleanliness in every respect. Those who must necessarily be much employed about the sick, should not approach too near them, should not draw in the foul air about them, should not bring their clothes in contact with their bed-clothes, should not remain too long in their immediate neighbourhood; and should, if possible, not approach the sick-chamber when fasting, or when debilitated by cold, fatigue, or any other means. A circumstance that renders persons more particularly liable to be infected with contagious disease, is a certain depression of mind, or fear of catching the infection; while those who are bold and confident commonly escape. Hence the virtue of certain substances, worthless in themselves, but which, being believed by the bearers to be of use, tend to realize the expectations formed of them, by giving courage to those who must have intercourse with the sick. Another circumstance which seems to give contagion a destructive power, is the exhaustion produced by famine and fatigue; hence its occurrence in besieged towns, and in armies, after fatiguing and harassing marches.

Methods of destroying CONTAGION. To the great benefit of mankind, it has been discovered of late years, that fumigation with certain substances has the power of destroying contagion, and rendering it comparatively safe to be in the rooms of the sick. One of the most effectual means for this purpose, is to take some common salt and to pour sulphuric acid upon it. There arises the vapour of muriatic acid; and this, properly diffused through the room, has a strong anti-contagious power. We may also pour sulphuric acid on saltpetre, by which we shall obtain the vapours of the nitric acid, which are equally efficacious in the destruction of contagion. Even when there is no typhus apparent, it will be proper to fumigate crowded and close places, in order to prevent fever; this is necessary in ships, jails, barracks, hospitals, and the like; being careful, at the same time, to pay the utmost attention to cleanliness and ventilation. It is for this reason that we now so seldom hear of the destructive ship and jail fever, since proper attention is paid in every well disciplined ship and well regulated jail to the above particulars; though we are still distressed by the prevalence of fever in the crowded, damp, dirty, and close hovels of the poor and profligate.

The other contagions that produce specific diseases, are those of small-pox, of measles, of scarlet fever, of mumps, of the hooping-cough; the general laws of which are not materially different from those of typhus fever, though we are not so sure of destroying them by fumigation. When an infectious disease breaks out where a number of people live together, as in barracks, hospitals, boarding-schools, and the like, the sick should be immediately separated from the sound; no superfluous furniture should be kept in the room, and no more attendants than necessary should be about the sick; the doors and windows should be opened frequently; and occasional fumigations, as above describ-

ed, should be employed. It is a matter of some consequence to know how long a period may elapse between the patient's receiving the infection and the appearing of the disease. This varies in different cases, but it may be latent from the tenth to the seventy-second day.

CONTRACTILITY. The power which muscles or muscular fibres possess of shortening themselves, and so performing their functions.

CONTRACTION. A drawing together, a shortening or diminution. When a joint, from any cause, loses the power of being fully extended, there is said to be a *contraction* of that joint; motions are performed by the fibres of muscles *contracting* or shortening themselves by swelling in the middle; and when the pupil of the eye diminishes its size on the application of light, it is said to *contract.*

CONTRA-INDICATION. The appearance of any symptom which forbids a certain thing to be done, or a remedy to be applied. Thus when any thing occurs to render bleeding improper, we say that bleeding is *contra-indicated* by that circumstance.

CONTRAYERVA, *Dorstenia Contrayerva.* A perennial plant, growing in South America and some of the West Indian Islands; the root of which is used as a gentle stimulant and diaphoretic in typhus and dysentery. The dose is half a drachm; but it is in no great repute.

CONTUSION. A bruise or injury inflicted by the impulse of a hard substance. This is not unfrequently a pretty severe affection, as the soft parts are crushed between the bone and the foreign body that inflicts the injury. The treatment of a contusion will depend on its severity, and the extent of the injury. The effect of external violence is to excite a degree of inflammation, and this is to be counteracted by the application of leeches, and by cold lotions. A solution of sal ammoniac in water is to be kept on the part till the heat is abated; if there is a laceration along with the contusion, a poultice of bread and milk should be applied; and when there appears a disposition to form matter, the part is to be treated with emollient poultices. When there is no wound, it will be necessary to rub the part with camphorated oil or turpentine liniment, or other stimulant embrocation. Sometimes a bruised part is very long of recovering its action; in this case, it may be useful to pour a stream of tepid water, either pure or holding some salt in solution, from a height; and to rub the part affected with a coarse dry towel.

CONVALESCENCE. The state of a person who is recovering from illness.

CONVULSION. A diseased action of muscles, or of muscular fibres, during which they contract violently and irregularly, and have alternate relaxations.

CONVULSION-FITS OF CHILDREN. When we speak of convulsions, or convulsion-fits, we most commonly mean epilepsy; and principally that species of it which occurs in very young children; and of this we shall give an account here, referring to the article EPILEPSY for the particular symptoms and treatment of those convulsive actions which appear in older persons.

Symptoms. In some cases convulsions come on suddenly, at other times the attack is gradual, and the first symptoms elude the observation of the attendants. In the sudden attack, the child, previously quite well, becomes livid in a moment; his eyes and features are contorted, and the limbs and whole body are violently agitated. These symptoms end by the patient falling into a state of insensibility, which in some cases proves fatal, and in others goes gradually off. In those cases where the attack is milder and more gradual, the child shows some degree of uneasiness; he suddenly changes colour, his lips quiver, his eyes are turned upwards, and he stretches himself out, or his hands become clenched. Sometimes there is a rapid succession of fits; sometimes the intervals between them are long. Convulsions vary also in their degree of violence. Before the fatal termination of

many of the diseases of infancy, convulsions occur, and appear to be the cause of death. Hence their taking place after long or serious illness, may be considered as an indication of approaching death. But a single fit may destroy an infant. "When the return of the convulsions is not suspended within forty-eight hours after active treatment has been adopted, there is reason to dread either a sudden fatal termination, or a long protraction of the disease. In this latter case, if the infant do not become emaciated, there is a probability of his eventual recovery, even although he had been blind and insensible for days or weeks. In some rare cases, though the health be restored, imbecility of mind remains. If emaciation attend the protraction of fits, the living powers at last give way." (Professor Hamilton *on the Diseases of Infants and Children.)*

Causes. Convulsions arise from any thing capable of strongly irritating the nervous system; hence infants and young children, whose nervous system is so very delicate, and who are exposed to so many causes of irritation, are by far the most frequently affected with convulsions. These may arise from worms in the intestines, from certain kinds of food disagreeing with the child, from acidity, from wind; and, with remarkable frequency, from teething. Another cause of convulsions in children, is the too sudden disappearance or going in of a rash or eruptive disorder. Children very frequently are seized with convulsions just before the appearance of small-pox; and in some cases, though very rarely, they occur before the appearance of measles. The general irritation arising from want of cleanliness, living in foul air, &c. may give rise to convulsions. Sometimes they are only the symptoms of a more deep and violent disease, as of water in the head, or growth of bone within the skull. In this case, our attention is to be directed to the original disease; the symptoms and treatment of water in the head will be detailed in their proper place.

Treatment. When convulsions suddenly attack a child, there are certain measures to be pursued in order to put a stop to the fit if possible; and means must be taken to remove the irritating cause as quickly as we can. One of the best and safest ways of putting an end to the convulsion, is to put the patient into the warm bath, and to give a few drops of the volatile tincture of valerian. The whole of the body is to be very carefully examined, as fits may arise from some injury which the attendants have concealed, as from the pricking of a pin. If the irritation be from teething, the gums should be scarified; and it may be requisite to do this repeatedly, before the teeth get through, and the convulsions cease. If we think that acidity in the stomach and bowels occasions the convulsions, we must correct it by the use of magnesia, alone or with rhubarb; or by some prepared chalk, interposing a few grains of calomel, or giving castor oil or senna. When any improper article of food has been taken, it may be advisable to attempt to clear the stomach by an emetic; although, during convulsions, it is not a very safe or practicable measure. If the fits have been preceded by startings, and if the heat of the skin be great, the face and neck are to be spunged with cold water and vinegar. In cases of apparent sudden death from convulsions, after one or two fits, if the child has been previously in good health, the usual means for restoring suspended animation should be very diligently and perseveringly employed.

When the fit is over, our object must be to prevent its return; and therefore we are to direct our treatment to remove the cause. If there be flushing of the face, insensibility, and frequent starting and oppressed breathing, some blood should be drawn by a few leeches on the temple, and some purgative medicines are to be given. Worms are of various kinds; and for children, the safest medicines for dislodging them are proper doses of jalap and aloes: but as these are so very nauseous to young palates, we

are compelled sometimes to give them by way of injection, and this is a very good way of destroying the small white worms. An infusion of senna to the amount of four or six ounces, with a drachm or two of the tincture of aloes, may be given as a clyster. If a rash has been repelled, we must try to bring it back by warm bathing, or by the application of some irritating substance to the skin, as ammonia, or tartar emetic ointment, or a blister. A running behind the ears should not be suddenly stopped, but allowed to heal very gradually; compensation being made by the bowels being kept easy, or by an issue in some other place. When convulsions continue, as they often do, after the exciting cause is removed, we are to give opiates and other antispasmodics, taking care that the bowels be not injured by the use of opium. Rubbing the spine and chest with oil of amber or opodeldoc, sometimes is of service.

Children recovering from convulsions should be carefully attended to, with respect to their bowels, their diet, and their general health; and every means should be employed to strengthen them, without imparting to them a tendency to inflammatory diseases.

No reliance can be placed on any of the drugs which have obtained reputation from their fancied powers against fits. Cochineal has no power whatever; and rue, and musk, though occasionally useful, have no title to be considered as specifics in this disease; and less, if possible, can any trust be put in the boasted quack medicines for convulsions; on the contrary, being generally preparations of opium, they have all the pernicious properties of that substance when it is given by rash and ignorant persons.

COOKERY is that application of heat to our various aliments, either single or combined, by which they are prepared in some measure for the stomach; and rendered both more agreeable to the palate, and more susceptible of undergoing the various processes of digestion. By cookery, the nutritive principles are altered, both in their chemical arrangements and their mechanical texture. Its principal operations are boiling, roasting, frying, broiling, and baking. By *boiling*, the principles not properly soluble are rendered softer, more pulpy, and easier of digestion; but the meat at the same time is deprived of some of its nutritive properties, by the removal of a portion of its soluble contents. The albumen is rendered solid, and the gelatine is converted into a glutinous substance. When meat is boiled too long or too fast, if it contains much albumen, as in beef, we shall obtain a hard and indigestible mass, like an overboiled egg; or in young meats, such as veal, where there is more gelatine, the result will be a gelatinous substance, not easily digestible. Young and viscid food, therefore, as veal, chickens, &c. are more wholesome when roasted than when boiled, and are easier digested. Many substances would be better cooked by exposing them for a longer time to a lower heat than boiling, as for instance mutton-tea and beef-tea. The loss occasioned by boiling, partly depends on the melting of the fat; but chiefly from the dissolving of the gelatine and some other animal principles. But in Scotland, we are wise enough to use as food the water in which all meat, except pork, has been boiled; and thus we get the good both of the solid and liquid parts. Boiling is very properly applied to vegetables; as it renders them more soluble in the stomach, and deprives them of a quantity of air, so injurious to weak stomachs. But even in this case, the operation may be carried to an injurious extent; thus potatoes are frequently boiled to the state of a dry insipid powder; instead of being preserved in that state, in which the parts of which they are composed are rendered soft and gelatinous, so as to retain their shape, yet be very easily separated. On the other hand, the cabbage tribe and carrots are frequently not boiled long enough, in which state they are highly indigestible. The quality of the water used in boiling requires some at-

tention; mutton boiled in hard water is more tender and juicy than when soft water is used, while hard water renders vegetables harder and less digestible.

Roasting. By this process, the fibre is corrugated, the albumen coagulated, the fat melted, and the water evaporated. As the operation proceeds, the surface becomes first brown, and then scorched; and the tendinous parts are rendered soft and gluey. When underdone, meat may be more nourishing; but, from the closeness of its texture, it will not be so easily digestible. Animal matter loses more by roasting than by boiling; by boiling, mutton loses one fifth, and beef one fourth; but by roasting, they lose one third of their weight.

Frying. This process is perhaps the most objectionable of all the operations of cookery. The heat is applied through the medium of boiling oil or fat, which is rendered empyreumatic, and therefore extremely liable to disagree with the stomach.

Broiling. By this operation, the sudden browning or hardening of the surface prevents the evaporation of the juices of the meat, which imparts a peculiar tenderness to it. It is the form selected as the most eligible, by those who seek to invigorate themselves by training. But though this may induce a state of body fit for the savage purposes intended, the over-excited health so brought on, is peculiarly liable to become changed into disease by very slight causes.

Baking. The peculiarity of this process depends upon the substance being heated in a confined space, which does not permit the escape of the fumes arising from it; the meat is therefore, from the retaining of its juices, rendered more savoury and tender. But baked meats are not so easily digested, on account of the greater retention of their oils, which are, moreover, in an empyreumatic state. Such dishes, accordingly, require the stimulus of various seasonings to increase the digestive powers of the stomach. As there is commonly much pastry made with butter, used to confine the odour of the meats baked, such accompaniments render pies of all kinds difficult of digestion, and peculiarly unfit to form a frequent part of the diet of children. Besides, the use of pastry with children too early teaches them to please the palate at the expense of their health.

COPAIBA, OR COPAIVA. The balsam of copaiba is a liquid resin, obtained by wounding the bark of a tree called the *Copaifera officinalis*, which grows in South America. It is in a slight degree purgative, and is thought to strengthen the nervous system. It is principally used for its operation on the urinary organs, which it is supposed to clean and heal, when in a state of ulceration. Hence, it is thought beneficial in gleets and in the whites. The dose is from twenty to thirty drops, reduced to the form of emulsion by rubbing it with oil of almonds, or mucilage of gum arabic, and gradually adding a proper quantity of water. It should not be employed when inflammatory symptoms are present.

COPPER. A well known and very valuable metal; from the various preparations of which, several active and useful substances in medicine and the arts are procured. The principal of these are, the ammoniuret of copper, the sulphate of copper or blue vitriol, and the sub-acetate of copper or verdigris. The two last salts of copper are principally used by surgeons as external applications. The blue vitriol is used as an escharotic to destroy proud flesh; and ointment, made with verdigris, is useful in dressing indolent ulcers. The blue vitriol is also given internally, when an active metallic emetic is wanted. The dose is five or six grains; and it is chiefly when the vegetable narcotic poisons have been swallowed, that such emetics are employed. It is an object of much importance when such emetics are given, that no portion be left in the stomach, as it will be seen in the subsequent part of this article, that the preparations of copper are of themselves poisonous. On such occasions, therefore,

plentiful dilution is required, by chamomile tea, tepid water, thin gruel, barley-water, or the like.

Poisoning by Copper. Copper, in its metallic state, exerts no action on the stomach; as has been proved by the very numerous cases in which children have swallowed copper coins without any bad consequences. But though in general, articles of food meeting with copper in the stomach do not render it noxious, we have many instances which show how dangerous are the mixtures produced by cooking the same articles in badly tinned copper vessels. When tin is present, it prevents the copper from being dissolved, and hence the utility of tinning such utensils. But any of the above mentioned *salts* of copper, when taken to a certain quantity, are poisonous; and it is by the formation of one of these salts in culinary vessels, and its consequent admission into the system, that dangerous and even fatal accidents are sometimes produced. The acid contained in certain pickles and other articles of food, acts upon the copper, and produces a salt which imparts deleterious qualities to the food cooked in such vessels. The symptoms induced are, headach or dizziness, vomiting, thirst, with a constant taste of the copper remaining in the back part of the mouth; oppression on the breast, acute pain of the stomach, griping of the bowels, eruptions on the skin, palsy, delirium, and death. The taste of copper is so nauseous, that persons are generally put on their guard against swallowing any considerable quantity of it; and it is chiefly when it is greatly disguised in food or medicine that it has the opportunity of producing its deleterious effects.

Treatment of those who have swallowed Copper. The vomiting which is excited when copper has been inadvertently swallowed, renders the exhibition of emetics unnecessary; but should sickness, without vomiting, accompanied with pain at the stomach, ensue, it may be proper to give ten or twelve grains of white vitriol to promote the speedy evacuation of the offending matter; and sugared water may be given largely to assist in the same purpose. When an emetic is not required, mucilaginous substances, oil, butter, and milk, will be useful; but the latest experiments of Orfila induce him to recommend the whites of eggs in large quantities, as the best antidote against the poison of copper. Another good antidote is the ferrocyanate of potassa, called also the prussiate of potassa. Vinegar, so frequently administered in cases of poisoning, must, in the instance of copper, be most carefully avoided.

The experiments of Sir Humphrey Davy, on the sheathing of the bottoms of ships with copper, have furnished a new illustration of the very different effects of copper and its salts on animal life. Where copper is prevented by galvanic influence from being dissolved, the bottoms soon become covered with every species of sea insect; but where the copper sheathing is not protected by the contact of another metal, and a salt of copper is formed, they are uniformly free from marine animals.

COPPERAS. The name given to white, blue, and green vitriol, or the combinations of the sulphuric or vitriolic acid with the oxides of zinc, copper and iron.

CORDIALS. Certain substances of a stimulant nature, given with a view to excite the action of the heart and arteries. They most commonly consist of alcohol, either simple or diluted, or holding in solution some aromatic or stimulant substance. They are principally used in cases of fainting, or in diseases attended with great debility; and their use should not be persisted in after the immediate end of their exhibition is accomplished, as there is considerable danger of inducing a habit of indulging in the use of spirituous liquors; which, though grateful at the time, are apt to bring on many unpleasant bodily feelings, and create a craving for their repetition. The cases in which cordials are proper are such as these: 1. In the advanced stages of fever and other debilitat-

ing diseases. The cordials we may here employ are wine, or wine and water; diluted spirits, compound tincture of bark, tincture of cinnamon, tincture of gentian, aromatic spirit of wine holding ammonia in solution. 2. In cases of fainting: we may here employ certain preparations of hartshorn, of ether, or valerian; giving wine or spirituous liquors if the patient can swallow. 3. After surgical operations. 4. After delivery, but with the utmost caution as to kind, quantity, and continuance. We are to be regulated by the state of the patient, by the length of the labour, and by the degree of exhaustion. Sometimes brandy or wine will be required, sometimes a small dose of laudanum; at other times a little tea will be quite sufficient; and as a good general rule, it may be stated, that after a single cordial, every thing stimulating is to be forbidden for many days.

CORIANDER, *Coriandrum sativum.* A plant growing in the south of Europe, the seeds of which are considered as stomachic and carminative, and accordingly are used in certain infusions, tinctures, and electuaries.

CORN. A hardened part of the skin, with a root, sometimes extending deeply into the cellular substance. Corns are owing to long continued or repeated pressure, and occur principally on the toes and soles of the feet. Tight shoes are one of the most frequent causes of corns; and hence they are often troublesome to females and others, who are particularly attentive to appearance, and who wish to exhibit a neat and small foot. Happily the mutability of fashion has occasioned the disuse of high-heeled shoes; a most pernicious custom, by which very injurious pressure was made on the anterior parts of the foot, and corns very frequently produced. Corns sometimes exist without giving much pain or trouble; but in other cases they give so much uneasiness, as absolutely to incapacitate for walking. They are made more particularly intolerable, by every thing that quickens the circulation, or which heats the feet, or causes the corn to press on the neighbouring parts. Hence, tight shoes, much walking, warm weather, heating liquors, all tend to render the uneasiness of corns very great, and they are generally worse in summer than in winter; and persons are frequently obliged to sit down to take off their shoes, and rest the foot in a horizontal posture.

Treatment. Corns may often be readily cured, by avoiding the above exciting causes, by wearing large soft shoes, and by continuing for some time at rest. Hence ladies frequently get rid of corns during an in-lying. It is useful to take a considerable number of folds of linen, covered with some softening ointment, cut a hole in the middle for the corn to lie in, and to apply them to the foot; and if it be in the sole of the foot, it may be useful to have an additional moveable sole, with a hole cut in like manner. If, along with this mechanical and palliative treatment, we use the following method, a corn will be easily and quickly eradicated: It is to be touched with lunar caustic, and wrapped round with adhesive plaster; and generally at the end of a fortnight, the dead cuticle will be removed with the corn adherent to it. If the corn does not come away, the operation is to be repeated. Several other remedies of the same kind are recommended, of which the principal are, soap plasters, or mercurial plasters, or blistering ointment. The following plan may also be tried: Every night and morning the foot is to be put into warm water for half an hour, and while there, the corn is to be well rubbed with soap. All the soft white outside of the corn is afterwards to be scraped off with a blunt knife; but we must not persist in this scraping, if the person complains of pain in any part of it. This treatment is to be continued without interruption till the corn is totally eradicated, which it will be in about a fortnight. It is generally a difficult and painful operation to cut out a corn. Unless it be completely taken out, it is apt to grow again

and this it does faster than if it had been let alone. In old people it is highly dangerous to cut a corn, as this too frequently excites an inflammation and consequent mortification, which carry off the patient. It is much better to be content with the plasters above described, with bathing, and other palliative means. When a person has once got rid of corns, they are very ready to recur, unless he take particular care to avoid pressure, to wear wide and soft shoes, and not to walk too much, especially in warm weather.

CORNEA, TRANSPARENT. The clear part in the front of the eye, through which the rays of light are transmitted, and through which we see the pupil and iris. This transparent cornea is subject to a variety of diseases. Abscesses may form between its layers and may leave scars, which will prevent the free transmission of light; and a more frequent or distressing occurrence still, is its becoming opaque, the consequence of which is the blindness of the patient. It is one of the bad sequels of long continued ophthalmia. Some kinds of this opacity are produced by the blood stagnating in the veins of the cornea; and are to be treated with astringent washes or ointments, or even by cutting across portions of the distended vessels, as they run into the cornea. Another very bad kind of opacity is that termed by surgeons *staphyloma*, in which the cornea loses its transparency, rises above the level of the eye, and even projects beyond the eyelids. It is sometimes owing to the purulent ophthalmia with which infants are attacked soon after birth; and occurs frequently at the latter period of small-pox, when the pustules dry and the scales are falling off. There is no remedy by which this opacity of the cornea can be removed, and if the projection be so large as to protrude before the eyelids, and to prevent them from shutting, it may be necessary, by caustic, or by other means, to remove the projecting part, or even the whole of the eye.

CORONARY VESSELS. The blood-vessels conveying the blood to and from the muscular substance of the heart itself. They are so called from their surrounding it like a corona or fillet. *Coronary* ligaments are those uniting the bones of the fore-arm; and one of the attachments of the liver is called the *coronary* ligament.

CORROBORANTS. Whatever is believed to give strength to the body, whether diet or medicines. It is a term not much used; and to such articles of the Materia Medica we more commonly give the name of tonics.

CORROSIVE substances are those which have the power of destroying the texture of parts to which they are applied. Of this kind are the stronger mineral acids, the alkalis, and some of the metallic salts.

CORROSIVE SUBLIMATE OF MERCURY. One substance to which the epithet *corrosive* is more particularly applied, is the bi-chloride of mercury, which goes under the name of *corrosive sublimate*, from its properties, and from its being prepared by sublimation. It is soluble in water and in spirits of wine; it is also very soluble in sulphuric ether. Its taste is strongly styptic, metallic, and acrid; and remains very long in the mouth. Corrosive sublimate, from its solubility in water, from its activity, and from being easily disguised, is the active ingredient of almost all the cosmetics and washes for the diseases of the skin, and of those quack medicines of great pretensions, which are to cure the venereal disease without the use of mercury. All such should be regarded with great suspicion, and never employed; as their use is attended with the greatest hazard of introducing into the body one of the most poisonous substances known.

When corrosive sublimate is medicinally employed in order to obtain the effects of mercury on the constitution, its dose must be very small indeed, not more than the eighth part of a grain night and morning in solution in distilled water, or made into a pill with liquorice and honey; and that for a very few days,

and under the most judicious superintendence. The solution is sometimes applied as a wash in cutaneous diseases, in the strength of five grains to a quart of water; but this too must be watched, lest the mercurial effects be occasioned by the absorption from the surface of the body.

Of Poisoning by CORROSIVE SUBLIMATE. Not unfrequently, by accident or design, corrosive sublimate is taken into the stomach. The symptoms produced are severe vomiting, purging, and pain in the belly, tightness in the throat, dryness and shrivelling of the lips and tongue. The pulse is small, and the breathing oppressed, and there is commonly blood in the stools and in the matter vomited. The period within which death occurs from this poison, is from eleven hours to thirty-six or forty. But the alimentary canal is not the only way in which corrosive sublimate may be introduced so as to act as a poison on the body. It is dangerous when applied to a wound in the cellular tissue; and when introduced in this way, has, like arsenic, the singular power of inflaming the stomach and intestines. It also possesses the power of inflaming both the lungs and the heart. Nervous affections, stupor, and convulsions have also occurred.

Treatment. When inflammation of the stomach is very urgent, we must combat that symptom by general or local bleeding; aware, however, of the danger of great subsequent depression; and castor oil or other mild laxatives may be given. Albumen or the white of egg has happily been ascertained to be a most effectual antidote to corrosive sublimate. The white of one egg renders four grains of the poison inert. A few years ago, this discovery of Orfila's was the means of saving the life of M. Thenard, the chemist. While at lecture, this gentleman inadvertently swallowed, instead of water, a mouthful of a concentrated solution of corrosive sublimate; but having immediately perceived the fatal error, he sent for the white of eggs, which he was fortunate enough to procure in five minutes. Although at this time he had not vomited, he suffered no material harm. Without the prompt use of the albumen, he would almost infallibly have perished." (DR. CHRISTISON *on Poisons.*)

Many examples are recorded of the success of this practice. Vegetable gluten, as contained in wheat flour, is said to answer the purpose as well as albumen; and for this purpose we have only to give wheat flour and water; or to mix six parts of fresh gluten with fifty parts of a solution of soft soap. When neither albumen nor gluten is at hand, milk is a convenient antidote of the same kind. All the old antidotes, as liver of sulphur, bark, and charcoal, have been tried and found ineffectual.

COSMETICS. Certain washes which ladies are induced to use, with the hope of beautifying the skin and adorning the person. Few regular practitioners will give any encouragement to the use of these, as there is always hazard of dangerous accidents occurring. The most noted are some of the preparations of mercury, or solutions of the nitrate of silver; and from the use of this last, effects the very reverse of beautiful take place. Ladies have gone into the bath with a fine white skin, and have come out brown or black, from the chemical action of the water or gases on the cosmetic. Gowland's Lotion, a noted cosmetic, is a solution of corrosive sublimate in an emulsion of bitter almonds; and whoever reads the preceding article, will probably not be very ready to meddle with such dangerous compositions.

COSTIVENESS. The usual frequency of evacuating the bowels for persons in good health, is once in twenty-four hours. The constitutions of different people vary in this respect; some having two or three motions in a day without any inconvenience or ill health; others not having above one or two in a week. When a person has habitually fewer motions than the generality of healthy people, he is said to be of a *costive* habit; and when

he has at any time fewer than his ordinary rate, and when the fæces are hard, dry, and voided with difficulty, he is said to be *costive.*

Causes of COSTIVENESS. Independently of medicine, it is not very easy to specify any diet or mode of living that universally predisposes to costiveness. Many articles have been blamed, and yet have been used by thousands without producing that effect. Rice in various modes of cookery; the finer kinds of bread; roast meat, eaten without a due proportion of vegetables; cheese; port and other dry wines; an indolent and sedentary life; and a sea voyage, are all known to occasion costiveness in certain individuals. In some infants, this state is constitutional; and for some time, at least, appears to do them little harm. It is very apt to occur in children, as their volatility and playfulness cause them often to disregard the calls of nature, till a great and dangerous mass of feculent matter is accumulated in their bowels. The indolent and sedentary lives of females predisposes them much to costiveness. The structure of their pelvis, also, allows a larger mass to accumulate without inconvenience, from which circumstance, the fæces are deprived of almost all their fluid parts, and the remainder becomes dry, hard, and difficult to be voided. Persons of the melancholic temperament; also those who are advanced in life, and those who take little exercise, are liable to become costive.

Dangers of COSTIVENESS. The dangers to be apprehended from excessive costiveness are, a stagnation of blood in the head, or too much determination to that important cavity; hence giddiness, ringing of the ears, and all the symptoms of threatening apoplexy, frequently occur in those who are habitually or occasionally costive. Costiveness is apt likewise to bring on much derangement of the digestive functions, and to give rise to flatulence, fetid eructations, and all the long train of what are called stomach complaints. Long continued costiveness is often followed by severe colic, even proceeding the length of iliac passion. In the case of infants, it may bring on convulsions, fever, or other unpleasant symptoms. In children, costiveness is particularly to be avoided; in them it is not unfrequently the forerunner, if not the cause, of water in the head. In young women, especially about the time when the monthly discharge is beginning to be established, much inconvenience and hazard attend a costive habit of body. Costiveness should be carefully avoided during the whole period of pregnancy, and especially as the time of delivery draws near. It should be very generally inculcated, that costiveness is a state or tendency of the constitution which is never to be neglected; and since the young are so thoughtless, it must be the part of parents and others to think for them, and to pay particular attention to the regularity of their alvine discharges. This is particularly necessary for the female sex as they approach the age of puberty.

Treatment of COSTIVENESS, *and modes of preventing it.* The first milk taken after birth generally proves laxative to the child, and the bowels soon get into a regular state; but, should this not happen, a little castor oil, or manna, or magnesia, or the tincture of senna, may be necessary once or twice a-week even with very young infants. This costive state is very generally accompanied by wind in the bowels, which distresses the infant very much, occasioning griping pains, which are shown to be present by the infant screaming, and drawing up its legs to the belly. The wind is expelled by the assistance of a little sugar of anise, or a little magnesia given in anise water, with a drop or two of tincture of valerian or ammonia. The belly may be fomented with chamomile flowers, and friction with the warm hand may be resorted to. During the whole time of teething, costiveness should never be allowed to continue above a single day.

To counteract costiveness, in general we must use such articles of food as

are known to promote a proper laxity, of the bowels; and certain drugs also are necessary for this purpose. The principal dietetic means, are the use of a due proportion of vegetable diet, the taking of certain preparations of milk and farinaceous food; ascertaining by experience what sort of drink answers best, and continuing the use of such; keeping a regular temperature of the skin; and endeavouring to acquire a certain regularity of time in soliciting the alvine evacuation.

The substances from the Materia Medica used for the prevention of costiveness, are mild purgative or laxative medicines taken daily, or as often as they may be required; and as it is far from being agreeable to have recourse to purging medicines very frequently, a selection should be made of those, which are most likely to bring quickly into a due efficiency the alimentary canal. For children, we are obliged to employ a considerable variety; and it is often no easy matter so to disguise or overcome the nauseous taste, as to get them to swallow enough for the purpose. Senna, or the infusion of tamarinds, Gregory's powder, cream of tartar, calomel, either alone or with rhubarb or jalap, castor oil, small doses of the neutral salts, as sulphate of soda or sulphate of magnesia, are to be used. For those who can take pills, there are certain kinds well adapted for costive habits. The common aloetic pill, or aloes with colocynth, or the extract of jalap, or Anderson's pill, which are made of Barbadoes aloes, are good for this purpose. *See* ALOES.

COUCHING. The operation for depressing the opaque lens out of the sphere of vision, in order to cure a cataract. *See* EYE *and its Diseases.*

COUGH is a strong effort to clear the windpipe or air-cells of the lungs from mucus, blood, air, gas, or any substance that irritates them, either by its bulk or acrimony. Cough is not often a simple and primary complaint, but it is a frequent attendant on very many disorders of the chest and lungs.

In attempting to relieve a cough that is very troublesome, we must direct our chief attention to the disease of which it is a symptom. The principal diseases of which cough is an attendant are the following: 1. *Catarrh* or *Common Cold.* The cough in this complaint is preceded by sneezing, running at the nose, inflammation of the eyes, as described under the article CATARRH. It is at first dry and hard; but as the disease advances, it becomes more free, and is accompanied with expectoration, sometimes in a most wonderful quantity. As the complaint is going off, the cough is most troublesome in the morning and evening, and frequently prevents the patient's sleeping for a great part of the night. It is only when the inflammatory state of the system is removed, that we can venture on an opiate to allay this troublesome symptom. For this purpose, twenty-five drops of laudanum or a drachm of the Scotch paregoric may be given at bed-time; or if the cough be very annoying in the day-time, from ten to fifteen drops of laudanum may be given three or four times in the course of the day. 2. Cough attends *pleurisy or inflammation of the lungs;* and is one of the greatest aggravations of that painful and dangerous affection. Here there must be no opiate or other quieter of the cough used, till copious blood-letting and other antiphlogistic means have brought down the violence of the inflammation. When the cough seems to remain principally from habit or some slight irritation, an opiate may be given; but should be abstained from as long as possible, lest the salutary expectoration should be checked, and the system too much heated. The squill mixture, with a little syrup of Tolu; or three ounces of capillaire with half a grain of tartrate of antimony, dissolved in three ounces of water; or six ounces of mucilage of gum arabic, with an ounce of squill vinegar or common vinegar, and two ounces of simple syrup; taken respectively in the dose of a table-spoonful four times a-day, are as safe remedies as can be used for the cough; but in too

many instances, they will not be found sufficient to remove it, but will require to be assisted by blisters, local bleeding, tartar emetic ointment, or equally active means. 3. Of *measles*, cough is one of the earliest, most prominent, and long continued symptoms, to be combated only by the means useful for treating the primary disease, which vary in different cases; sometimes requiring blood-letting and other antiphlogistic practice; and sometimes the warm bath, and other means of promoting perspiration. Demulcent mixtures, such as those mentioned above, are proper at all stages of the disease. In scrofulous constitutions, the cough in measles often remains after other symptoms are cured, and passes into fatal consumption or other disorder of the lungs. 4. The cough in *hooping-cough* is of a peculiarly violent and harassing kind. Unless from experience, we should never believe it possible that the constitution could bear the repeated shocks of a paroxysm of hooping-cough, and yet in a great majority of cases, the patients seem to suffer little injury by it. In some cases there is fever, pain, and inflammatory symptoms, which require to be treated by bleeding and blistering. 5. *Asthma* is frequently accompanied by cough, which is excited by dust, by smoke, and any sort of air that irritates the morbidly sensible organs of respiration. Antispasmodics are the best remedies in this case. 6. Many people are subject to what is called a *nervous cough*, which may subsist for a long time without fever or any organic disorder of the lungs, and proceeds from sympathy with some more distant organ. Thus a nervous cough often accompanies the various states of the monthly discharge, as its non-appearance or obstruction, and the state of pregnancy or green sickness. Cough also is a frequent attendant on diseases of the kidneys. 7. In the long train of *consumptive symptoms*, the cough is one of the most persistent and troublesome. It may sometimes be alleviated by demulcents and opiates, but never cured. 8. A cough is often very troublesome to old people, many of whom are affected with a catarrh, *catarrhus senilis*, in which a great quantity of mucus is constantly expectorated. It is not a desirable thing to stop this cough and spitting in old people, as that might lead to more serious and alarming symptoms. A little demulcent mixture, as above described, is all that should be used; with a grain or two of the sulphate of zinc taken internally, twice a-day, in solution; or made into a pill or bolus with gum arabic or conserve of roses. 9. *Foreign bodies* getting into the windpipe occasion severe and violent fits of coughing. A crumb of bread, a particle of salt or pepper, a drop of liquid, even of the mildest kind, as water or milk, rouse into action a great number of most powerful muscles, which exert a strong and almost convulsive action to expel the intruder. Calcareous substances forming in the lungs themselves, and sometimes a foreign body working its way into them by ulceration of neighbouring parts, occasion a cough, which lasts for many years. 10. Irritations of the upper part of the *gullet*, and swellings of the *tonsils*, or polypi in their neighbourhood, have been known to occasion violent and long-continued cough, accompanied with purulent-like spitting, emaciation, and all the symptoms of confirmed consumption. When such excrescences have been removed by a surgical operation, or discussed by the use of remedies, the whole formidable train of symptoms has disappeared, and the patient has been restored to perfect health.

From what has been stated above, we see how rarely our attention should be directed merely to relieve or stop a cough, and how necessary it is to attend to the disease of which it is a symptom. Occurring as it does so very frequently, it has attracted much of the popular notice; and for no symptom is there so great a number of private and domestic recipes. They are generally pretty harmless, being chiefly decoctions of various herbs, well sweetened with honey or sugar, and

sharpened with a little vinegar; or they are emulsions of oil of almonds or of sweet oil; of which the worst effect is to load the stomach, and impair digestion, while they mock the hopes of the patient, and are quite inadequate to remove his complaint. The venders of patent medicines for cough, assume a bolder attitude, and confidently promise to cure sixty or eighty thousand coughs in a year, by one safe and infallible medicine. Their medicines are generally active enough; but, unfortunately, they are active in a wrong direction. They are opiates or other stimulants, which may for a time give relief; but which, if given in some coughs, would increase the inflammation from which they proceed, and add incalculably to the dangers of the patient. Hence it is proper to be always very cautious in the use of cough nostrums, whether prescribed by the kindness of friends, or forced upon our notice by the interested importunity of quacks.

COUP DE SOLEIL, stroke of the sun; an affection induced in warm climates by the direct action of the sun's rays. In this disorder, a person falls down suddenly, as if apoplectic; and unless he dies immediately, the attack is apt to terminate in inflammation of the brain. After the first attack has been recovered from, we must turn our attention to the prevention of inflammation, by applying cold to the head, by bleeding, both general and topical, by purging, and the other parts of the antiphlogistic regimen. At first, when the powers of life seem to be low and nearly extinguished, it may be proper to use stimulants, though with great caution. *See* BRAIN, *Inflammation of.*

COURSES. *See* MONTHLY DISCHARGE *of Females.*

COW-ITCH, *Dolichos pruriens.* A plant growing in the East and West Indies. Its fruit is a pod, covered on the outside with reddish-brown hairs, which easily adhere to the fingers and occasion a most intolerable itching. These hairs are formed into an electuary with jelly, treacle, or honey, and are used to expel worms, which they do mechanically; the intestines are protected from their action, and when they reach the worms, principally the long round worm, they occasion great irritation, and cause it to quit its hold, when it is expelled by a purge given shortly afterwards. It is not very often employed now against worms in this country.

COW-POX. An eruption of a vesicular nature, which arises from the insertion of a peculiar matter into the system, either at a scratched or an abraded part. As this matter is obtained from an eruption on the teats and udders of cows in England, and especially in Gloucestershire, the disease produced is called *Cow-Pox;* the matter is frequently donominated *vaccine* matter, and the whole affair, inoculation and its consequences, is called *Vaccination.*

Symptoms and Treatment of Cow-Pox. Instead of a useless affectation of originality, it will be better at once to insert Mr. Bryce's correct and valuable description of the effects of the Cow-pox.

"About the third day after the insertion of the virus of cow-pox, either by puncture or by slight incision in the arm, a small inflamed spot may be observed in the part where the inoculation was performed: Next day, this spot appears still more florid, especially if the person be warm; and by passing the point of the finger over it, a degree of hardness and swelling in the part is readily perceived. On the fifth day, a small pale vesicle occupies the spot where the inflammation was, and the affection begins to assume the characteristic appearance of cow-pox. In place of inflammation, extending around the base of the vesicle, at this period, as is common in small-pox and most other pustular diseases, the whole has a milky white appearance. The vesicle is now turgid, but evidently depressed in the centre, while the edges are considerably elevated. For the next two days, the vesicle increases in size, and retains the same character; so that by the seventh, it has ac-

quired very considerable magnitude, and is of a circular form if the inoculation was performed by a puncture, or of an oblong form if done by an incision; but in both cases the margin is regular and well defined, while the centre, becoming still more depressed, and a small crust forming there, and the edges becoming more turgid, give the whole a very particular appearance and character, which, in my opinion, may readily serve to distinguish this affection from every other.

"The structure of this vesicle, as may be perceived at this period, is singular, and very different from the structure of the pustule which occurs in small-pox. In small-pox, the whole fluid of the pustule is contained in one entire or undivided cavity, and may be all readily evacuated by one small puncture. In cow-pox, however, it is very different; for here the vesicle is greatly subdivided, or is composed of many cells, the whole somewhat resembling a honey-comb, with a general covering from the cuticle.

"About the eighth day from the time of inoculation, inflammation begins to appear around the base of the vesicle. This increases for two, or perhaps three days more; and when at the height, the inflamed part is in general quite circular, and from half an inch to two inches or more in diameter. This inflamed circle, or areola, acquires an erysipelatous brightness; and the whole, more especially the part contiguous to the vesicle, feels very hard and tense. At this period also, the vesicle still retains the concave appearance; the crust in the centre has considerably increased in size, and begins to assume a dark or brownish colour, while the turgid edge assumes more of a shining appearance, as if the contained fluid were passing into a purulent state. About the eleventh day, the vesicle has attained its greatest magnitude, and then the surrounding inflammation and hardness begin to abate; and it is curious to observe, when this takes place, that the redness generally disappears first from the neighbourhood of the vesicle, and thence gradually towards the edge of the areola, often leaving at the last a complete but slender florid ring or circle of inflammation, marking the circumference of the faded areola, the inner part having changed to a dingy yellow. The fluid in the vesicle, which was before very thin and transparent, is now more viscid and slightly turbid; and, after this period, the whole is quickly converted into a smooth, shining, and somewhat transparent dry crust, of a dark brownish or red colour. This crust, unless forcibly removed, will remain upon the part for one, or sometimes two weeks, and then fall off, leaving the parts underneath quite sound and entire.

"Such, then, is the general course of the affection as it appears at the part inoculated; and, in the greater number of instances, especially in children infected with this ailment, little more is to be remarked; in some, however, and particularly in adults, marks of a constitutional affection are common.

"About the eighth day from the time of inoculation, the glands in the axilla become a little swelled, occasioning pain and stiffness on moving the arm. Headach, shiverings, a frequent pulse, and other febrile symptoms take place; and these have been observed to continue from a few hours to two or more days. These symptoms, however, are in general so slight and transient as to require no aid from medicine." (Mr. Bryce *on Cow-Pox.)*

About the twentieth day after the inoculation, the dry, contracted, and black scab is detached, and leaves a permanent circular scar about five lines in diameter; the surface being marked with very minute pits or indentations, denoting the number of cells of which the vesicle had been composed. When the whole is over, it may be allowable, though it is very seldom necessary, to give the person a little laxative medicine.

Effects of Cow-Pox. The affection above described derives the highest value and importance, from its operating such a change on the human constitution as ef

fectually and permanently to secure it from the *danger* of small-pox; and almost universally to render it incapable even of receiving the contagion of that formidable and loathsome disease. A fact so wonderful, and a result so beneficial, deserves to be established by the strongest evidence; and in a learned and inquiring age, a discovery of such vast importance was not likely to be admitted without the strictest investigation. More than thirty years have now elapsed, since Dr. Jenner of Gloucester announced the discovery that has conferred immortality on his name, that cow-pox is an effectual preventive of small-pox; and in these years, observation and experiment on the most extensive scale in every quarter of the globe, have assured us, that with as few exceptions as belong to any research connected with the phenomena of living beings, our confidence may remain unshaken. On a subject like this, in which mankind of every rank and profession are interested, it is peculiarly the province of a professedly popular work to be full and explicit; and we shall therefore, in the remainder of this article, give a historical account of the progress and present state of vaccination; we shall state the degree of confidence we are warranted to have in it as a preventer of small-pox; and assign some reasons why it should be universally adopted.

History, Progress, and Present State of VACCINATION. It had been long observed in several of the dairies in England, particularly in Gloucestershire, that an eruption frequently appeared on the udders and teats of the cows, which was communicated to the hands of those who milked them; and that those persons who had been thus affected, and who never had undergone small-pox, were afterwards incapable of being infected with that disease, either by inoculation or by exposure to the most virulent contagion. The origin of this disease in the cow has been traced to a thin acrid matter which issues from the heel of the horse, when affected with an inflammation and swelling, called the *grease;* and as the men-servants who have the care of the horses in the dairy farms generally assist in milking the cows, they transfer the matter from the horse to them, and thus produce the cow-pox. The knowledge of a fact so curious and important was long confined to those among whom it was a familiar occurrence, till Dr. Jenner examined the subject with care and attention; and, with the candour and benevolence of an enlightened mind, published it for the benefit of mankind. After satisfying himself of the truth and correctness of the fact, Dr. Jenner, in the year 1798, published an account of this most remarkable affection; and his description of its causes and effects aroused the attention of mankind, and the astonishment of the medical world. It might be supposed that those who were best qualified to judge of the subject, would receive the statement with doubt and hesitation. That matter from a brute animal should have the power of operating such a change on the human constitution as to secure it from one of the most wide-spreading maladies ever known—that it should secure youth and beauty from their most formidable assailant—that tender and anxious parents should have their families protected from what had appeared for centuries an inevitable and often fatal ordeal through which they had to pass—that the hopeless blindness and the scarred and pitted face, so frequent and lamentable, might be made a rare or never-seen occurrence—all this seemed passing strange, and too good to be true. Extensive and strict investigation was made; and though many arguments, and some facts were brought forward which seemed adverse to the preventive powers of cow-pox, yet its incalculable utility was at last evinced; and observation and experience furnished evidence enough to satisfy the Baillies and Heberdens, the Monros and Gregorys of Britain, as well as the physicians of Europe, India, and America.

When Dr. Jenner began his inquiry,

he inoculated with the matter of small-pox many persons who, thirty or even fifty years before, had undergone the cow-pox; and such persons completely resisted the small-pox. These persons had received the cow-pox without any intention, merely by handling the infected animal; but Dr. Jenner inserted by inoculation some of the vaccine matter in another person, that he might more accurately observe the progress of the affection. It was remarkably slight, but distinctly marked in all its stages; and having inoculated the person who had undergone it, with small-pox matter, he found that this affection, slight as it was, had completely secured him from taking small-pox. Here then was an important discovery, that matter from the cow, intentionally inserted into the body, gave a slighter ailment than when received otherwise, and yet had the same effect of completely preventing small-pox. But of what advantage was it to be for mankind, that the cows of Gloucestershire possessed a matter thus singularly powerful? How were persons living at a distance to derive benefit from this great discovery? Dr. Jenner having inoculated several persons from a cow, took the matter from the human vesicles thus produced, and inoculated others, and others from them again; thus making it pass in succession through many individuals, and all with the same good effects in preventing small-pox. In the many years that have elapsed since these first experiments, cow-pox matter has probably passed through a succession of above a thousand individuals, and preserved its properties undiminished. The period of discussion and opposition at first was very short, and the observations and experiments of Jenner and his followers seemed so satisfactory, that cow-pox inoculation was everywhere practised, both by private practitioners and in public establishments; and this with such success, that from many populous districts all over the world, small-pox was entirely banished; and many a medical man, for a great part of his noviciate and early practice, knew only by reading and report that so horrid and loathsome a disease had ever existed.

A discovery of so great and general importance was not to be expected to pursue its triumphant career without disturbance. When we remember that discoveries in natural philosophy, though supported by arithmetic and geometry, have been assailed and contradicted, we cannot wonder that a subject which interests persons of every degree and kind of morals and understanding, which opposes the prejudices of mankind and the pecuniary interests of the more unworthy members of the medical profession, threatening at once their pudding and their praise, should be assaulted with malignant virulence. Instances were ostentatiously brought forward of persons who had been vaccinated, and who had taken small-pox in spite of the preventive; some doubted the utility of the practice altogether, while others believed that after a certain number of years, the preventive powers of cow-pox were totally lost.

In the first eight or ten years after vaccination was introduced, there were many reasons why disappointments should happen. To make a slight scratch on an infant's arm, and to insert a little matter, without having any subsequent disease to watch, seemed so trifling and easy a business, that multitudes of persons became professed vaccinators. Clergymen, midwives, parents, and benevolent individuals were ready to inoculate for cow-pox. But many of them never looked to the vesicle afterwards to ascertain whether it had gone through its regular stages; many prevented the system from being affected, by drawing away the greater part of the vaccine matter to inoculate others; and few were aware that there are certain states of the system and diseases of the skin, which prevent the cow-pox from having its usual and proper effect. When all this is taken into ac count, we need not wonder that many who are said to have been vaccinated

should afterwards be found to have taken small-pox; the wonder rather is, that such sanguine and careless conduct was not followed with more calamitous results. Yet in spite of it all, it is an undoubted fact, that for a considerable number of years, small-pox was hardly ever seen. Some cases of eruptions, however, at length did appear, which candid and unprejudiced physicians could not overlook: persons who in their infancy had been vaccinated to the complete satisfaction of their medical attendant, now having reached the age of ten, twelve, or fourteen, were seized with eruptions very much resembling small-pox in the previous symptoms, the appearance of the pustules, and the general fever. These eruptions were believed to be *chicken-pox*, a disease which requires considerable accuracy of attention to distinguish it from small-pox, especially at its commencement, and which by no means unfrequently attacks persons who have gone through the regular small-pox. When this explanation could not be adopted, from the complete dissimilarity of the disease in question to chicken-pox, those who still were unwilling to cast away the advantages of vaccination, acknowledged that if it did not absolutely and universally secure from small-pox, it wrought such a change in the constitution, that the person who was seized with small-pox took the distemper in a form greatly mitigated, and nearly free from danger. It was stated also, that it was not so true as it is generally thought, that a person cannot have small-pox twice; that many instances are on record of its occurring more than once in the same individual; and that there was reason to think that chicken-pox was not a disease arising from a distinct and specific contagion, but merely a kind of small-pox, changed or modified by various circumstances, either in the constitution of the person attacked, or in the character of the epidemic. If small-pox did not secure from a second attack of small-pox or from chicken-pox, it was possible that cow-pox might not do so; and it remained for medical men to watch narrowly, and report faithfully, the degree of security afforded by vaccination. For a considerable number of years after the introduction of the new practice, the small-pox had been always very mild, and therefore the efficacy of vaccination had not been very severely tried; but about the year 1816, a small-pox epidemic, of great extent and virulence, aroused the attention of medical men anew to a strict inquiry into the preventive powers of cow-pox. So many who were seized with small-pox were found never to have been vaccinated, that it afforded a melancholy proof of the indolence or prejudices of the inhabitants of that country to which mankind had been indebted for the great discovery; but among the multitudes who were affected with eruptive disease during that wide-spreading epidemic, not a few were found to have been regularly and satisfactorily vaccinated, either by private practitioners or public establishments. Medical men now inquired with much anxiety, and with laborious research, into the history of former small-pox epidemics; and the following particulars were stated by high authority: Numerous examples were pointed out, of persons having twice been infected with small-pox. For a long period, it was distinctly and familiarly known even by the most ignorant, that there were different kinds of small-pox, some occasioning a very mild and safe disease, others occasioning a disease accompanied by violent fever, numerous pustules, a putrid tendency, and death. It was equally well known, that those differences depended chiefly on the constitution of the person affected, and not at all on the variolous matter, whether received by atmospheric contagion, or inserted by inoculation; as it was quite a common thing to see one person infect the various members of the same family with small-pox of very different degrees of malignity; and persons having a very bad small-pox often communicated a very mild one to others, while the reverse also very frequently

happened. In some years also, the great majority of small-pox cases did well, while in others a very great proportion of them proved fatal. It was a very common occurrence to find persons with a disease beginning very like small-pox, and having an eruption which the most skilful observers could not distinguish from small-pox, get well much sooner than what was usual in that disease; the pustules speedily drying and blackening, or being filled with a watery fluid never suppurating, or being dry or shrivelled and hard. As it was very generally believed that no person could take the small-pox twice, these irregular eruptions were considered as originating from a totally different contagion, and received appropriate names, as chicken-pox, swine-pox, horn-pox, &c. These eruptions were found on persons who had passed through the small-pox, both natural and inoculated; and persons who had been seized with these eruptions afterwards were found to be susceptible of small-pox; and from these circumstances it began to be suspected, that all those eruptions arose from one and the same small-pox contagion; that the passing through even the severest disease of the small-pox kind did not absolutely and universally secure the constitution from passing through the same a second time, or from having some other of the anomalous eruptions; but that any of the subsequent attacks, whether small-pox, chicken-pox, swine-pox, or whatever form they might assume, were, with hardly a single exception, so mitigated and modified, as to be almost entirely free from danger. In the historical research and practical observation by which those points have been ascertained, no inquirer is more distinguished than Professor Thomson of Edinburgh, and to no one are we more indebted for the zeal and industry with which he investigated a subject so deeply interesting to mankind. Assisted by able and candid coadjutors, he has collected such a mass of evidence on the subject of small-pox, in all its forms and varieties, as must for ever set the question at rest as to the degree of security afforded by one attack of the disease against subsequent or similar ones; and by ascertaining the powers of cow-pox, to give not merely the same, but a far greater degree of security, he has done to humanity the most essential service, by fixing on an immovable basis the merits of vaccination.

Besides the immense mass of historical evidence which Dr. Thomson has brought forward, he states the result of his own experience in the course of the epidemic, which he styles varioloid, that is, having the nature or resemblance of small-pox, which began in Edinburgh in 1818. Eight hundred and thirty-six cases came under his observation; of these, two hundred and eighty-one occurred in individuals who had neither had small-pox nor cow-pox, and of these fully more than one in four died; seventy-one had previously passed through small-pox, and of these two died; four hundred and eighty-four had undergone the process of vaccination, and of this number only one died. Here was the most triumphant evidence of the beneficial effects of cow-pox in protecting the human constitution from the dangers of small-pox, and the great advantage which would certainly arise were the practice of vaccination universally adopted.

Extent of the security afforded by Vaccination. From the ample experience and observation of Dr. Thomson and others, it is now considered as established, that a person may have small-pox twice; and that a first attack, though it lessens, does not altogether destroy the susceptibility of the same individual to a second attack. That a second attack may appear, either in a regular form of small-pox, or in some of its modifications, swine-pox, hives, &c.: That small-pox, and at least some other eruptive diseases, are produced by the same specific contagion, and that the diseases produced by it are modified by various causes, as peculiarity of constitution, the severity of the epidemic, or by the patient having undergone some previous eruptive disease, which

had power to protect the system from the usual severity of small-pox: That cow-pox possesses this protecting power in a remarkable degree, as the body which has been subjected to it will not receive small-pox by inoculation, though it will sometimes receive it when the atmospheric contagion is very active: That when small-pox does occur in the vaccinated, it is generally mild and free from danger; that small-pox does not protect the constitution from small-pox at all so generally or effectually as cow-pox does, since the cases of a second attack were found to be more numerous and more severe than those cases which occurred after cow-pox.

Reasons against inoculating with SMALL-POX. So slow is the progress of reason and truth, so difficult to conquer prejudices or to alter habits, that many people would rather have their children pass through small-pox than trust to vaccination; and medical men are yet to be found who will comply with their wishes in this respect. Yet there are many reasons against this practice. Though the small-pox is in general rendered milder by inoculation, yet it is by no means invariably so; many to whom it was imparted in this way have been known to have a severe and fatal disease; and in others who did recover, many marks were left, and the lurking maladies of the constitution, as scrofula, &c. were called into operation, as certainly as after natural small-pox. Inoculated small-pox does not infallibly secure the individual from a second attack, either in the regular form or in what is called horn-pox, swine-pox, &c. Of those carefully observed in the epidemic at Edinburgh in 1818, one-twelfth part who had previously passed through small-pox took it again, and two out of seventy-one died. Even although a mild small-pox may be communicated by inoculation to one person, he may infect his neighbours with small-pox of the most malignant kind; these may infect others, and thus the security of one may be dearly bought to the community by the sufferings and death of thousands. While small-pox inoculation is continued, we can never hope to render general the safe and easy practice of vaccination, which insures a mild and modified disease to any who may be infected with small-pox contagion. The enlightened and honourable part of the medical profession have, with hardly an exception, refused to inoculate with small-pox matter; and it is only those who take advantage of the ignorance and prejudices of the vulgar, who are active in keeping up the pernicious practice. The Board of the National Vaccine Establishment, in their report for the year 1820, say, "We find that the multitude, in many places, have been so infatuated as to accept the proffered services even of itinerant inoculators. Hence a perpetual source of contagion is supplied and kept up." Nor is the evil yet likely to be at an end; for in the London newspapers, at the commencement of September 1827, it is stated, that the small-pox is kept up by the more worthless class of apothecaries, who inoculate with that disease for five shillings a-head. Under some of the arbitrary governments of the Continent, where power can be exerted for good as well as ill, the practice of vaccination is enforced by legal enactments, and inoculation for small-pox is prohibited under severe penalties; the consequence is said to be, that in some of their states, small-pox has ceased to exist. The spirit of English liberty will hardly tolerate legislating on such a subject, though it is not easy to see why it should not be brought under police regulations as well as the plague; but, till this be done, we can only hope that the superior advantages of vaccination will commend themselves to the notice and support of the well-informed classes of society, and by their influence be extended to its lowest ranks, and in this way alone will small-pox be extirpated.

Reasons for VACCINATION. Were vaccination some formidable and dangerous operation, attended with certain present

suffering, and communicating only a distant and doubtful advantage, one might feel reluctant to recommend it, and might consider much argument and persuasion necessary. But when the whole affair consists in two slight scratches, followed by a vesicle or two, which must be very much mismanaged indeed to give the child a moment's uneasiness, and which is all over in fifteen days, we are ashamed to waste many words in advising parents to subject their children to so easy a process. A common bleeding, a purge or a blister, which many people submit to in order to preserve health, is far more severe to the constitution than the whole process of cow-pox.

This simple affection from vaccination, (for it cannot be called a disease,) has been proved by the experience of thirty years to secure the constitution from small-pox with far greater certainty than small-pox secures from a second attack of that epidemic; and instead of a crop of fiery pustules and suppurating boils over the whole body, there is no eruption except at the spot where punctures have been made. This is of itself a most powerful reason for preferring vaccination. Small-pox, when given by inoculation, in many cases filled the body with scars, and left the face pitted and disfigured; and it was observed, that of those who applied to public charities for blindness, two-thirds had lost their sight by small-pox. From all such calamitous circumstances cow-pox is entirely free. In the crowds who frequent public places, or are seen on the streets of great towns, how few who have grown to youth and manhood within the last thirty years, present the melancholy wrecks of beauty which were formerly so often seen. Vaccination then is recommended by the mildness of the practice, by the security it affords against dangerous small-pox, by the fewness of its vesicles, by its being attended with no risk to others, and by its preserving unimpaired the beauty of the countenance. The religious scruples against inoculating with small-pox, which were entitled to respect, have no foundation here. Some might conscientiously consider it as a tempting of Providence, to inflict a severe and dangerous disease which it was possible might be escaped; and a good man would be very unwilling to purchase the possible security of his own child, at the risk of infecting a whole neighbourhood; but all such fears for vaccination are groundless; the patient himself cannot be called ill, his friends may approach him with perfect safety, and he communicates no infection to the atmosphere around him.

Proofs that VACCINATION *has been properly performed.* It has been said in a thousand instances, that such and such a person has had small-pox after having been *inoculated*, meaning by this, inoculated for cow-pox. But it does not follow, that because a person has been inoculated, he can be considered as *vaccinated*, or endowed with that security against small-pox which vaccination affords. If the puncture at which matter was inserted, heals without the formation of a vesicle, either from there being too little matter applied, or from its being washed off with the blood, or rubbed off by the clothes, the most ignorant cannot think that in such a case, cow-pox has affected the constitution. Some have inoculated with common purulent matter, or with cow-pox matter when the vesicle was beginning to turn; or they have broken all the vesicles too soon, and taken away the matter which should have affected the constitution. Vaccination has been found to fail when there is extensive chronic disease of the skin present. Now, to know whether vaccination is perfect, besides its going through the regular stages described at page 163, and leaving a distinct and characteristic mark, the following test has been proposed by the late Mr. Bryce of Edinburgh, and very generally adopted as satisfactory. When the vaccine inoculation has been performed, and the vesicle is going on properly, a second inoculation is performed on the other arm, in the course of the fifth day of the process; and

it is found, that when the system is properly affected, the second puncture is covered with a vesicle, which, though smaller, goes through its stages, and is surrounded with an inflamed circle, so as to finish its course at the same time as the first.

Does the matter of Cow-Pox *lose its virtue by being transmitted through a succession of individuals?* The length of time that has elapsed since vaccination began, enables us to give a satisfactory answer to this question. At the public establishments, the matter has been transmitted from one child to another, through upwards of a thousand individuals; and it has been found that matter taken from the first origin, the grease of the horse, produces an affection in no degree differing from that which is produced by the matter taken from the last vesicle of the long succession.

The security afforded by Vaccination *is not at all diminished by the lapse of time.* Dr. Jenner found, that persons in whom vaccination had been performed thirty, and even fifty years before, resisted completely the infection of the small-pox; and in the extensive epidemic of 1818 and 1819, Dr. Thomson found, that the mildness of small-pox which occurred after vaccination, was not at all influenced by the more or less remote period at which vaccination had been performed. Those persons, therefore, were mistaken, who asserted that the security against small-pox went on decreasing in proportion to the length of time that elapsed.

Cow-Pox *does not occasion other diseases.* Another assertion equally ill-founded has been made against vaccination, that other diseases, and especially skin-diseases, particularly measles, have been more frequent and severe, since the introduction of vaccination. Let it be remembered, that all that the most zealous advocates for vaccination claim, is its power of preventing almost entirely, and certainly of greatly mitigating, the severity of small-pox. If therefore, a hundred children are saved from dying by small-pox in the first years of life, there are a hundred more subjects for the other diseases of childhood over which vaccination has no controul; a hundred more to be affected by hooping-cough, by scarlet fever, by measles, or by croup. In such a case, other diseases will appear on the bills of mortality to be more frequent, but this is not the fault of vaccination. Neither are the diseases of children at all more fatal of late years than before cow-pox was heard of. The universal observation of the most experienced practitioners attests the contrary.

Conclusion. It must appear evident, that in the whole history of the vaccine inoculation, the medical profession have conducted themselves with the liberality and candour for which they are so honourably distinguished. As the small-pox generally attacked individuals in the interesting and helpless period of childhood, when parents would spare no cost within their power to bring them easily and safely through that loathsome disease, the conducting of this branch of practice was a certain and lucrative source of revenue to medical men; yet, when they believed a sure preventive had been found, they did not with cruelty and selfishness conceal it, but spread it through the world for the benefit of mankind. When the experience of revolving years convinced them that their first hopes were too sanguine, and that they had admitted too unreservedly the efficacy of cow-pox as a complete preventive of small-pox, they were not ashamed to acknowledge their error, and to rate the value of cow-pox at a lower, but still a most important standard.

CRAB, *Cancer Pagurus.* A species of shell-fish frequently used at table. They are nutritive, but to some stomachs very indigestible. Like other shell-fish, they are sometimes known to occasion pain in the throat and stomach, with eruptions on the skin. As found in the market, they are generally under-boiled, with a view to their keeping, and this renders them

more indigestible. The same remarks are applicable to lobsters.

CRAB'S YAWS, a name given in the West Indies to certain ulcers in the sole of the foot, which have a hard, callous edge. *See* YAWS.

CRAMP. A painful and involuntary contraction of muscles, or muscular fibres. No part of the body which is supplied with muscles or muscular fibres is exempt from this affection, and in certain situations, it is accompanied with great danger. It may arise from keeping the limb in an awkward or constrained position, or from turning hastily or moving any part rashly; but it also occurs where there is no apparent reason for it; and it occurs in parts distant from those where a strong action is going on, as in the case of women in labour. Cramp not unfrequently seizes the muscles of the leg; the remedy is to be found in any thing that makes a sudden and strong impression on the nerves of the part or neighbourhood, as by putting the foot on a cold stone, or on the floor, or applying a cold cloth to the foot or leg. As already hinted, it is a very troublesome adjunct to the other pains and uncomfortable feelings during labour, and requires to be treated by opiates, friction, and the application of cold. When cramp occurs in the stomach, it is to be regarded as an affection accompanied with very great danger. It is to be combated by strong stimulants and antispasmodics; opium in full doses, a drachm of ether in water, or the volatile tincture of valerian, or ammonia, or assafetida; and in the absence of drugs, by draughts of warm water, with hot fomentations applied externally.

Though the affections we have mentioned above, are those that most commonly go by the name of cramp, there are others which are really so, but are more frequently treated of under other names; thus locked jaw is a cramp, and the convulsive motions in epilepsy and hysteria are of the nature of cramp; and griping of the bowels are also cramps, but the morbid actions above described are those which are popularly known by that name.

CRADLES. Some physicians think it is very doubtful, whether the practice of allowing infants to sleep in cradles, be at all necessary or proper. They suppose that rocking favours sleep, merely by inducing a certain degree of giddiness and determination to the head. Nothing certainly can be more absurd or dangerous than the violent and noisy rocking to which children are often subjected; and there cannot be the smallest hesitation about condemning this. Yet the cradle, in every nation, and from the remotest antiquity, has been so universally employed, and such countless multitudes of children have been rocked without any injury, that experience does not furnish a sufficient reason for prohibiting a careful use of the cradle wherever it may be thought convenient. All violent rocking on hard and unequal floors should be avoided, and cradles made like the cot used on shipboard are the best that can be employed.

CREAM. That portion of milk which rises to its surface, when it has stood for some hours; which may be skimmed off and separated from it. It has many of the properties of oil; when allowed to stand for some days, it becomes thicker, the flavour of cream is lost, and is succeeded by that of cheese. When cream is agitated by churning, it separates into butter and a fluid like skimmed milk. With some stomachs, cream disagrees, as a small quantity of oil or butter would do; but when taken in moderate quantity as an accompaniment to tea, coffee, fruits, &c. it in general gives no inconvenience.

CREAM OF TARTAR. Supertartrate of potash, a most useful medicine, obtained from the matter called tartar, incrusted on the bottom and sides of casks in which wine has been kept. This incrustation is purified by dissolving it in boiling water, and filtering it while hot; when cooling, the salt is deposited in irregular crystals, and is called crystals of

tartar, or cream of tartar. This substance is a very effectual diuretic. When given as such in dropsy, it may be taken in doses of a drachm twice a-day, dissolved in a large quantity of water. It is also used as a purgative; in doses of half an ounce made up into an electuary with an equal proportion of sulphur, it is an excellent laxative in case of piles; and added to jalap in the proportion of two parts of cream of tartar to one of jalap, it furnishes one of the best purgative powders we possess. It operates mildly and speedily, and besides its purgative effect, it is also diuretic. The dose of the compound powder of jalap is from forty to sixty grains, and it may be given in water, tea, beer, or any fluid vehicle, taking care that the cream of tartar be suspended in it, stirring it well immediately before taking it. Cream of tartar is not very soluble in water. The drink called *Imperial*, is a solution of cream of tartar flavoured with lemon peel, and is very useful in feverish disorders and other cases where a refrigerant drink is wanted. It is improper to use it as an ordinary beverage, as it has a tendency to retard digestion.

CRESSES, *Sisymbrium Nasturtium.* A plant growing plentifully in brooks and stagnant waters. The leaves have a pungent taste, and a penetrating smell like that of mustard seed. They are an excellent antiscorbutic; and sailors after a long voyage, when they fall in with them, are much benefited by their use. They may be eaten alone, or as part of a salad.

CRETINISM. That state of imbecility of mind and deformity of body which occurs in some districts of the globe, chiefly in mountainous regions and their corresponding vallies. Cretins have a deformed head, a diminutive stature, sickly complexion, and a vacant countenance. The skin is wrinkled, the muscles loose and flabby, and there is frequently the swelled neck called bronchocele. The faculties of the mind are as defective as the body is deformed, and are found in all degrees of imperfection, from stupidity to absolute idiotism. Cretinism is difficult to prevent or cure. When an infant is born who appears likely to become the subject of this deplorable malady, it should be removed to a distant quarter and to purer air. The cold bath should be diligently employed; and all means used for strengthening the constitution and giving the proper education to the mind, should be unremittingly employed. The intermarriages of Cretins should by all possible means be prevented.

CRISIS. The point of time when a disease comes to a height, and either takes a turn for the better or destroys the patient. In some diseases, this *crisis* is only to be remarked from the general constitutional symptoms; in others from the appearance of some eruption; in others from the formation of an abscess. Certain days, when it was supposed, and probably with justice, that some crisis or change takes place on the disease, were called critical days. *See the following article.*

CRITICAL DAYS. Great attention was paid to certain days, in the progress of acute diseases, by the ancients; and by the learned and well-informed physicians among the moderns. Dr. Cullen in particular, considers the observations of the ancients as correct; and in fevers, points out the seventh, ninth, eleventh, fourteenth, seventeenth, and twentieth days as critical. From the writings of physicians, the words *crisis* and *critical* have got into common language, with the meaning a little altered; thus we talk of a business being brought to a *crisis*, or a state in which some material change must take place; and we say, a person has been brought to a *critical* situation, that is, a situation of difficulty and danger.

CROCUS SATIVUS. The name of a flower from which saffron is obtained.

CROCUS or METALS. The name given in old chemical and pharmaceutical books to the oxides of some metals, as of antimony and iron.

CROTON. The name of a genus of plants, of which the most used in medicine are the *Croton Cascarilla* and the *Croton Tiglium.* *See* CASCARILLA.

CROTON OIL. The oil expressed from the seeds of the *Croton Tiglium*, which has lately been re-introduced into medicine. It is a very powerful cathartic; and is given in cases where a full and rapid evacuation is required, as in cases of long and obstinate costiveness, which have resisted other means of relief. It is used in apoplexy and disorders of the head, and in convulsive diseases, low spirits, and madness. The dose is a single drop; or sometimes, though very rarely, two drops, either on lump sugar, or diffused through mucilage; or it may be made into a pill with crumb of bread. This dose empties the bowels completely, and excites a copious watery secretion from them. Caution must be had in the exhibition of so active a medicine; and it is to be remembered that different samples of the oil differ in their activity.

CROTCHET. An instrument used for the extraction of the child in cases of difficult labour.

CROUP. A disease of great frequency and danger, most commonly attacking children and young persons, and requiring the most prompt and decided assistance. The symptoms of croup are the following: After exposure to cold or wet, the patient is seized with shivering, restlessness, and a difficulty of breathing, which goes on increasing, and is accompanied with cough, of a peculiar barking hollow sound, as if air were transmitted, in a broken and convulsive manner, through a brazen tube. Along with the increasing cough and difficulty of breathing, febrile symptoms of great severity appear; the face is flushed, the pulse is strong, the thirst urgent, the anxiety is great, and there is a throwing back of the head to escape suffocation and to favour respiration; which, besides being much interrupted by the painful fits of coughing, is performed with a hissing sound, as if some soft substance were in part obstructing the windpipe. There is present also a degree of swelling and sore throat, and the pain of this in swallowing adds to the sufferings of the patient. As the disease advances, the face becomes livid and swelled; there is a continual desire to change place; the respiration becomes more shrill, and is performed with greater difficulty and at longer intervals, till it at last ceases altogether. The cough is commonly dry, but sometimes thick purulent-looking matter is spit up, or pieces of a substance resembling a membrane. Croup consists in the inflammation of the mucous membrane of the trachea, by which there is a secretion of a very tenacious matter, and this occasions a contraction of the passage for the air. A degree of spasm also not unfrequently attends; and this spasm is an action of the muscular fibres that shut the aperture at the top of the wind-pipe, and a similar contraction is produced as by inflammation. It is very often altogether a spasmodic disease, without inflammation; and this suggests a very important piece of practice, giving an emetic at the commencement of croup of whatever kind. This disease is sometimes alarmingly short, running its course in twenty-four hours; sometimes it goes on for three or five days. Its favourable cessation is marked by the feverish symptoms abating, the perspiration being moderate, and the cough less frequent, noisy, and distressing.

Causes. The croup principally attacks young children; and those who have it once are more liable than others to a second attack. Some families seem more subject to croup than others; and certain districts of country, sometimes near the sea, sometimes near marshy ground, are more peculiarly apt to be infested with it. The cold easterly winds, accompanied with fog, which occur so frequently on the east coast of Scotland, are very commonly followed by croup prevailing almost epidemically. The disease is not contagious, but still it is improper to overpower the sick with superfluous care or too numerous attendants.

Treatment. When a child, after being unwell for a day or two, and having been previously exposed to cold, is suddenly

seized with a hoarse croupy cough, and with difficulty of breathing, the first thing to be given is a pretty active emetic; and every family where there are young children should keep by them a safe emetic, viz. from five to ten or twelve grains of ipecacuan. The operation of an emetic is sometimes so favourable, that the breathing is relieved, and the patient gets rid of the complaint; the stomach throws off some food which had disagreed with it, and which, perhaps, gave occasion to the spasmodic attack, or at least aggravated it. If the relief is less complete, our next step is to put the child into the warm bath, to apply a number of leeches round the upper part of the windpipe, to give purgative medicines; and, if the child be full and strong, it may be proper to take a quantity of blood from the arm. Antimonial medicines are to be given, both with a view to promote perspiration, and to diminish the inflammatory action going on in the system; the wine of antimony is scarcely admissible, and it is safer to give a watery solution of tartar emetic, in the proportion of two grains of it to four ounces of water, and of this solution a tea-spoonful is to be given every two hours. A blister is to be put on round the fore part of the neck, and the antiphlogistic plan is to be carefully pursued. In this disease, great reliance was some time ago placed on giving very large quantities of calomel, which form of mercury was supposed almost to be a specific in croup. Four or five grains were given every hour; large quantities of green stools were brought away; and some thought the separation of the living membrane of the trachea was affected by it. There is no doubt, that some very severe cases of croup get well under this treatment; but we trust rather to emetics, bleeding, blistering, and complete evacuation of the bowels.

Sore Throat, ending in CROUP. There is a peculiar and generally fatal disease in the throat and fauces of children, which frequently ends with the worst symptoms of croup. A clear and accurate description of it is given by Professor James Hamilton of Edinburgh.

Symptoms. "There is a very dangerous, but fortunately rare, modification of sore throat, which begins in the form of a whitish spot, like that of thrush (though more definite in its shape, being round or oval) on one or both tonsils, unaccompanied at first by fever, and attended with only a trifling degree of uneasiness in swallowing. By and by, this spot enlarges, its edges become of a florid colour, fever steals on, and the act of swallowing grows painful. A slough gradually forms, with evident ulceration at its edges; the fever increases, and headach and restlessness supervene. The partial separation of the slough, together with the rosy colour of the edges of the ulcer, with the moderate degree of fever for some days, promise a favourable issue. But very unexpectedly, slowness of breathing, without either difficulty or wheezing, takes place, with excessive and sudden sinking of the living powers, and it generally happens, that within a day from this change, the fatal event takes place. The breathing at first falls to eighteen respirations in the minute, then to sixteen, to twelve, and finally to ten or eight. Sometimes, with the sloughing, the tonsil swells, and in some cases both tonsils are affected. Two other symptoms occasionally attend the disease. The one is a most offensive fœtor of the breath, and the other is the sudden occurrence of croup. The croup has occurred before the sixth day, and the fœtor of the breath from the sixth to the ninth day after the disease is distinctly marked." The croup is the natural consequence of the spreading of the inflammation; and the remarkable affection of the breathing is considered by Dr. Hamilton as the consequence of a palsy of the nerves of respiration, by the matter secreted by the ulcers operating upon those nerves as a poison.

Treatment. This is a very dangerous and unmanageable affection. The ulceration in the throat goes on in spite of all the varieties of gargles we can employ

Leeches, purgatives, and blisters have no effect in stopping the progress of the disease. Indeed blisters are very apt to become gangrenous. When the inflammation has proceeded to the windpipe, and brought on the symptoms of croup, three or four grains of calomel have been given every hour, and in some cases this treatment has been successful. Dr. Hamilton gave the acetate of lead in a case which terminated favourably, and which he has recorded in the Edinburgh Journal of Medical Science for October 1826. The substance was administered in the form of solution, eight grains being dissolved in eight ounces of rose water, to which forty drops of laudanum were added. Half an ounce of this was given every three hours when awake. No inconvenience followed from the use of the acetate of lead; but by referring to the article LEAD, it will be seen how cautiously we should administer the preparations of this dangerous metal.

CRUCIAL. In the form of a cross, or decussating, a term applied to certain ligaments in the knee, and to incisions crossing each other.

CRUCIBLE. A chemical vessel made of materials capable of bearing a strong heat.

CRUDITY. Any thing ill digested.

CRURAL. Pertaining to the thigh. The arch formed between the haunch and share bones, is called the *crural* arch. A rupture at that place is called *crural* hernia; and the large nerves which pass through to supply the lower extremity, are called the *crural* nerves.

CRUSTA LACTEA. *See* SCALLED HEAD *and* MILK BLOTCHES.

CRYSTALLINE LENS. The name of one of the humours of the eye. It is situated just behind the aqueous humour, and its use is to refract the rays of light, and to contribute to form the image of objects on the retina. The thickening of this lens, or of its capsule, forms the disease called cataract. *See* CATARACT.

CRYSTALLIZATION. The tendency of bodies when in a state of solution or fusion, to assume certain regular and definite forms when they become solid, either by a reduction of temperature or a diminishing of the dissolving liquor by evaporation. The crystals of each salt have a different specific form; and this form is one of the particulars of a complete definition of a salt. Stony bodies which have been in the melted state, also assume regular figures when cooled; but the term crystallization is most commonly applied in the case of the neutral salts.

CUBEBS, JAVA PEPPER, *Piper Cubeba*, has lately been restored to the Materia Medica, principally as a cure for gonorrhœa. The berries have the appearance of common pepper; but each berry has a short stalk attached to it. The best are those which are large, heavy, and fragrant. Their flavour is aromatic and bitter. The form for administering them is in powder, in doses of one or two drachms three or four times a-day in a wine-glassful of water. The tincture also may be employed. Cubebs are most advantageously given in the early and acute form of the disease; and they moderate the pain, and lessen the discharge with considerable certainty. The urine is increased, becomes deep-coloured, and acquires an aromatic odour. Dr. Paris suggests a caution necessary during the use of cubebs, viz. to keep the bowels open; for where the hardened stools are allowed to accumulate, the spice insinuates itself into the mass, and produces excoriations at the lower part of the bowels.

CUCUMBER, *Cucumis sativus*. A plant, the fruit of which is eaten by way of salad or dessert. It is cooling and aperient, but apt to disagree with the stomach when the digestive organs are not in a healthy state. It should be eaten with pepper and oil.

CUCUMBER, WILD. *See* ELATERIUM.

CULINARY, belonging to the kitchen, or employed in food, or for the preparation of it, as *culinary* salt, *culinary* vegetables, *culinary* utensils.

CUMIN. The seeds of a plant, *Cuminum Cyminum*, a native of Egypt; but

the seeds which are used in this country are brought chiefly from Sicily and Malta. They have a strong and peculiar odour, and an aromatic and bitter taste. Cumin seeds are one of the ingredients of a plaster retained in the London pharmacopœia; but the Materia Medica might quite well be without them for any good they do, either externally or internally.

CUPEL. The name of a chemical vessel; a kind of crucible or covered earthen plate, for exposing substances to a very strong heat in the fire or furnace.

CUPELLATION. The operation performed by means of a cupel.

CUPPING. An operation in which glasses exhausted of air are applied to any part of the body; and the pressure of the surrounding external air forces the blood and fluids to that part. The air may be exhausted, either by heat excited by burning, within the glass, paper or cotton steeped in spirits of wine, or by a syringe acting as an air-pump. When the part upon which the cupping-glasses are applied has been previously scarified, blood may be very conveniently drawn from that place; and as we may have cupping-glasses of any shape, we have it in our power thus to abstract blood from surfaces, whether they be flat or prominent. Cupping is useful in disorders of the eyes; and in this case, blood may be taken from the temples, from behind the ears, or at the back of the neck. Cupping is also useful in apoplexy, epilepsy, and other convulsive disorders; and in all cases where there appears too great a determination of the fluids to any particular part. Dry cupping signifies the application of the exhausted glasses to a part, without abstracting blood. Its tendency is to invite the fluids from the internal parts to the place where the glass is applied. The operation should be repeated till the part is red and somewhat painful; its effect, in some measure, resembles that of blisters.

Cupping is seldom dexterously performed, except in the hands of professed artists. The difficulty consists in exhausting the glass only so far as to let the vessels under it be filled, but not to suffer its edges to press so firmly round as to impede the circulation.

CURD. When certain substances are mixed with milk, or when it is allowed to stand till it becomes sour, it is coagulated or curdled; that is, it is separated into a solid substance called *curd*, and a fluid called *whey*. Various substances have this coagulating power; spirits of wine, infusion of astringent vegetables, acids, several neutral salts, gum, sugar; and eminently, the gastric juice in the stomachs of animals. When milk is taken into the stomach, the first thing that takes place is its coagulation; but curd, when prepared out of the body, is sometimes oppressive to the stomach, and has even been known to occasion obstructions in the bowels.

CURRANTS, the fruit of the genus *Ribes*. There are three varieties of currants; all of which are much cultivated, on account of their pleasant and salutary properties, both in their natural state, and when prepared and preserved with sugar in the form of jelly. They possess a grateful acidity; they are cooling and laxative; and they tend to resist putrefaction. They may be usefully given in fever, and other diseases which are accompanied with thirst, and dryness of the tongue and throat. The jelly, when diluted with water, forms an excellent febrifuge drink; and the black currant jelly, when taken undiluted, is believed to be peculiarly beneficial in the different kinds of sore throat. The leaves of the black currant are very fragrant, and are thought to be possessed of considerable diuretic virtue.

CUT. A wound inflicted by a clean cutting instrument, without any bruise or laceration of parts. In the language of surgery, it is called a simple incised wound. Such wounds are most easily healed; and, in a great many cases, little more is required than to bring the edges of a cut together, and to retain them there by adhesive plaster and proper bandages, and to take care that the parts

are not disturbed by motion The most troublesome circumstance is the copious bleeding which sometimes occurs; and while this continues, the sides cannot be kept in proper contact. Sometimes the pressure of the first dressing is sufficient to stop the bleeding; but, in other cases, we must wait till the vessels of the part have bled freely, and begin to contract themselves. The wound is then to be cleaned with tepid water, and properly bound up. If the cut is deep and long, it may be feared that some artery of considerable size has been wounded; and if the bleeding does not stop by pressure, the artery will require to be secured by a ligature. If the bleeding from a cut be copious and alarming, the patient or bystanders should endeavour to stop it till the surgeon arrives. This is to be attempted by pressing the sides of the wound together; and in the extremities, it may be done by compressing the principal arteries, at a portion of their tube nearer the heart than the wound is. A handkerchief or other piece of cloth is to be rolled up tightly like a small cushion; and if placed on the inside of the arm above the elbow, and tied on with tape or another handkerchief, and this twisted firmly round with a stick, the flow of blood into the limb below will be checked. The same may be done at the inner part of the thigh; or pressure may be made in the groin, with the whole of the fingers of one hand, inclining a little towards the inner side.

When a cut runs parallel to the fibres of a subjacent muscle, there is little danger of the lips of the wound separating from each other; but if the direction of the cut be across a muscle, their union will be more difficult, and one or two stitches will be necessary. Stitches are also required in wounds of the head, and about the face, where it is of much importance to prevent deformity.

CUTANEOUS, belonging to the skin.

CUTANEOUS DISEASES form a subject of immense extent and importance. It is only within the last twenty years, that the diseases of the skin have attracted the attention they deserve; and Dr. Willan of London, followed by Dr. Bateman, has done much to remove the obscurity, and to disentangle the perplexity which was formerly connected with this very difficult subject. They have endeavoured to institute a more correct nomenclature, and a more accurate classification; and to point out more appropriate and effectual remedies than what were formerly employed. A name very generally given to diseases of the skin, and that with very little discrimination, is *scurvy;* a term which is quite improper, inasmuch as it is the name of a particular constitutional disease; and also because, by classing all skin-diseases under the same name, it leads to the employment of similar remedies, in ailments which are totally distinct from each other. An account of the principal diseases of the skin is given under their respective titles, as Itch, Leprosy, &c. *See* Eruptions *and* Eruptive Diseases.

CUTICLE. The external covering of the body, commonly called the scarf skin. It is thin and semitransparent, has no bloodvessels or nerves that can be detected, and exhibits no sensibility. It is frequently destroyed, and quickly reproduced. In some parts it is thicker than others, as in the soles of the feet, and in the palms of the hands of working people. The cuticle is the part that retains the matter discharged through the pores of the true skin by the action of a blister.

CYNANCHE. The name given in medical books to the different kinds of sore throat. The principal of these are:

Cynanche Tonsillaris. Common Inflammatory Sore Throat.

Cynanche Parotidea. Mumps.

Cynanche Trachealis, or Laryngea. Croup.

Cynanche Maligna. Putrid Sore Throat, very generally connected with Malignant Scarlet Fever.

The history and treatment of these different species of Sore Throat are given under their English names.

D

DALBY'S CARMINATIVE is a quack medicine, which is entitled to a *little* more regard than the tribe of its pretending and noxious brethren. In *proper hands*, it often answers the purpose for which it is given, and relieves the flatulence which is so distressing to infants. The dose is from two tea-spoonfuls to a table-spoonful, mixed with a little sugar and water.

The ingredients of this medicine are the carbonate of magnesia; the oils of peppermint, nutmeg, and aniseed; the tinctures of castor, assafetida, and opium; the spirit of pennyroyal, the compound tincture of cardamoms, and peppermint-water.

Dr. Paris, the great detector of the arcana of quackery, says, "In examining the pretensions of this combination, it must be allowed that it is constructed upon philosophical principles; this, however, is no reason why the physician should recommend it; the mischievous tendency of a quack medicine does not depend upon its composition, but upon its application. We ought to remember, says an eminent physician, that in recommending this nostrum, we foster the dangerous prejudices of mothers and nurses, who are unable to ascertain the circumstances under which it should be given, or even the proper doses. If its composition is judicious, why do not physicians order the same in a regular prescription, rather than in a form in which the most valuable remedy will be abused?"

DAMASK ROSE, *Rosa centifolia*. The petals of this rose are employed for the distillation of rose-water, which forms a very good solvent for those salts which are used as astringents; the sulphate of zinc, in the proportion of two grains to the ounce of rose water, is an excellent wash for sore nipples, and for the eyes in ophthalmia. These petals also yield an oil, prepared in large quantities and imported from the East, under the title of Otto of Roses.

DAMSON, *Prunus domestica*, a species of plum, which is cooling and laxative, and when perfectly ripe, affords a wholesome article for pies, tarts, &c. but when not quite ripe, plums are apt to produce colics, diarrhœas, and other unpleasant symptoms, especially in children. When dried, damsons, as well as the other species of plums, are called prunes; and they retain much of their refrigerant and laxative properties. They may be taken by themselves when stewed; or they are often directed to form part of the decoction of senna, of tamarinds, and other purgatives, given in a liquid form. The pulp of prunes is an ingredient in the electuary of senna.

DANCE, SAINT VITUS's, called by medical writers *Chorea Sancti Viti*, or simply *Chorea*, is a disease attended with convulsive motions, attacking both sexes, chiefly between the years of seven and fourteen, and rarely occurring after the age of puberty.

The origin of this name is said to be as follows. Some women who were disordered in mind, once every year paid a visit to the chapel of St. Vitus near Ulm, and there exercised themselves day and night in dancing, till they were completely exhausted. Thus they were restored, till the return of the following May

when they were again seized with a restlessness and disorderly motion of their limbs, in so great a degree as to be obliged, at the anniversary feast of St. Vitus, to repair again to the same chapel for the sake of dancing. From this tradition, the convulsive disease now to be described, took its name. (Dr. Parr, *Article Chorea.*)

An excellent description of the disease has been given by Dr. Hamilton, senior, of Edinburgh, in his valuable work on the Utility of Purgative Medicines, which we here insert.

"Chorea attacks boys and girls indiscriminately; and those chiefly who are of a weak constitution, or whose natural good health and vigour have been impaired by confinement, or by the use of scanty or improper nourishment. It appears most commonly from the eighth to the fourteenth year. I saw it in two young women, who were from sixteen to eighteen years of age.

"The approaches of chorea are slow. A variable and often a ravenous appetite, loss of usual vivacity and playfulness, a swelling and hardness of the lower belly in most cases, in some a lank and soft belly, and in general a constipated state of the bowels, aggravated as the disease advances; and slight irregular involuntary motions of different muscles, particularly of those of the face, which are thought to be the effect of irritation, precede the more violent convulsive motions, which now attract the attention of the friends of the patient.

These convulsive motions vary. The muscles of the extremities, and of the face, those moving the lower jaw, the head, and the trunk of the body, are at different times, and in different instances, affected by it. In this state the patient does not walk steadily; his gait resembles a jumping or starting; he sometimes cannot walk, and seems palsied; he cannot perform the common and necessary motions with the affected arms. This convulsive motion is more or less violent, and is constant except during sleep, when in most instances it ceases altogether Although different muscles are sometimes successively convulsed, yet in general the muscles, affected in the early part of the disease, remain so during the course of it.

"Articulation is now impeded, and is frequently completely suspended. Deglutition also is occasionally performed with difficulty. The eye loses its lustre and intelligence; the countenance is pale, and expressive of vacancy and languor. These circumstances give the patient a fatuous appearance. Indeed there is every reason to believe, that when the disease has subsisted for some time, fatuity to a certain extent, interrupts the exercise of the mental faculties.

"Fever, such as arises in marasmus, is not a necessary attendant on chorea; nevertheless, in the advanced periods of the disease, flaccidity and wasting of the muscular flesh take place, the consequence of constant irritation, of abating appetite, and impaired digestion, the common attendants of protracted chorea; and which, I doubt not, may, in some instances, although contrary to the opinion that chorea is not fatal, have been the forerunners of death."

The fits are sometimes preceded by a coldness of the feet and limbs, or with a sensation as of cold air rising along the spine, flatulence, pain of the bowels, and obstinate costiveness. At other times, nausea, yawning, stretching, and giddiness, with pains about the teeth and ears, usher in the convulsive motions. These motions assume the form of a sort of lameness and unsteadiness of one of the legs, which the patient draws after him in a ridiculous manner. The arm of the same side cannot be held still, but if it be laid on the breast, it is drawn from it by a convulsive jerk; if he is desired to thread a needle, it is attempted with many deviations, but rarely accomplished; if he endeavours to carry any drink to the mouth, it is only after many unsuccessful efforts that he hastily throws the liquor down the throat, as if for the amusement of the bystanders. There are often hys-

terical symptoms, laughing and crying, or passing from one of these to the other, on very slight occasions.

Causes. Chorea arises from various irritations, as teething, worms, disordered bowels, &c. Violent affections of the mind, as fear and anger, have been known to bring it on; in many cases, it arises from weakness; and sometimes, it first begins from seeing the disease in others.

Prognosis. "Those who have once suffered under this disease, are very subject to a relapse. However violent the symptoms, they are never suddenly destructive. When recent in a young person, there is hope of a speedy cure. If the menses are obstructed, their return will mitigate, if not cure the disease. If the temperament is one of great sensibility, or if the disease is hereditary or habitual, the cure is difficult." (Dr. PARR.)

Treatment. Though this disease is rarely attended with danger to life, unless when conjoined with epilepsy, or passing into it, still it is a very disagreeable disease, and parents are naturally very anxious for their children to get rid of it. Various plans have been proposed. By those who consider it a disease of debility, the cure of it has been attempted on the tonic or strengthening plan, by giving preparations of iron, bark, wine, and nourishing diet; by others, opium, ether, camphor, musk, and antispasmodics have been given, to allay the inordinate muscular motions; while many, and especially Dr. Hamilton, senior, of Edinburgh, are confident of effecting the cure by purgatives. Many interesting cases of success by this method have been brought forward by Dr. Hamilton; and Dr. Parr, of Exeter, treated more than sixty cases with purgatives, in one of which only he may have been styled unsuccessful. He says, "the choice of the purgative appears of little importance; but it must be active, for no other will produce the necessary discharge, and the saline purgatives are apparently less adapted to the complaint. The author knows no distinction, but in their power; the most active are the most useful. We have had no reason to follow the purgatives by tonics. The constitution has restored the general health with rapidity and effect." It is to be particularly attended to, that the purgative plan requires to be persevered in for a considerable time, and that the bowels often show themselves to be exceedingly loaded. The plan of treatment by purgatives is also decidedly approved of by Professor Hamilton, in his work on the Management of Children.

DANDRIFF. A slight whitish scurf which appears along the top of the forehead and temples in infants; on the back part of the head, the scales are large, flat, separate, and semi-transparent. Old persons sometimes have a similar affection on their scalp. The head must be regularly washed with soap and water, or with a weak alkaline or spirituous lotion, and the hair must be kept very thin, or removed altogether. It should not be neglected, lest it degenerate into scalled head.

DAPHNE MEZEREUM, *Spurge Olive.* *See* MEZEREON.

DATE. The fruit of a species of palm the *Phœnix dactylifera*, which is cultivated in the southern parts of Europe. The date is oblong, larger than an acorn, and includes a stone. The best dates are those which are soft, large, and not much wrinkled, of a reddish yellow colour on the outside, and a whitish membrane between the flesh and the stone. They are moderately astringent, particularly when unripe, yet are eaten as food in Africa. (PARR.)

DATURA STRAMONIUM, *Thorn Apple.* *See* STRAMONIUM.

DAWLISH. A village on the coast of Devonshire; a place of resort for invalids in pulmonary complaints, and others, which require a residence in mild air and among pleasant scenery. It resembles in its good properties the other residences on that coast. *See* SIDMOUTH *and* TOR QUAY.

DEADLY NIGHTSHADE, *Atropa Belladonna.* A perennial plant, with a herbaceous stem; growing in mountain-

ous and woody situations, and often cultivated in gardens. The whole plant is poisonous; and the berries, which are very beautiful, and of a fine red colour, sometimes tempt children to eat them; in consequence of which, they are seized with very dreadful symptoms, as a trembling of the tongue, dryness of the mouth, distressing thirst, difficulty of swallowing, fruitless efforts to vomit, and great anxiety. Delirium and convulsions come on: the pupil is dilated, and the eye is insensible to light. The face becomes swollen and of a dark red colour. Inflammation attacks the stomach and intestines; and the stomach becomes insensible to stimulants, so that it is in vain to give emetics to evacuate the poison, which is therefore very commonly fatal. Sulphate of zinc, to the extent of thirty grains, should be tried, or sulphate of copper, six grains; and it is said that vinegar and other vegetable acids, honey, milk, and oil, are useful auxiliaries in the cure. In some children who recovered by this treatment, the delirium was succeeded by deep sleep, and starting of the tendons; the face and hands became pale and cold, and the pulse was small, hard, and quick. Blindness continued a considerable time, but at last went off. The part of the plant used in medicine is the leaf, which has a nauseous bitterish taste, and is given at first in the dose of a grain a-day in powder. Besides its narcotic power, it is thought to possess considerable influence on the excretions of sweat, urine, and saliva; but as an overdose of it is so dangerous, and as we have other safer medicines which produce similar effects, it seems very doubtful whether its internal use should be recommended. A plaster, composed of equal parts of extract of belladonna and common plaster, is often of effectual relief in the case of local pains arising from chronic rheumatism; and the powdered leaves, sprinkled upon unhealthy sores, or an infusion of them employed as a fomentation, has allayed the pain of such sores.

Half a drachm of the dried leaves, infused in half a pint of water, furnishes a liquor, which, when dropped into the eye causes the pupil to dilate for a considerable time; and those who operate upon the eye, take advantage of this circumstance to facilitate their operations. Persons who are afflicted with a beginning cataract may, by having the pupil dilated by this infusion, have their sight improved for a time, as the dilated pupil will allow some of the rays of light to fall on the retina.

DEAFNESS means the loss or impaired state of the sense of hearing.

Causes. Deafness, more or less complete, is brought on by various circumstances. In palsy and in fever, deafness is common; and also when the brain is injured by a blow, by concussion, or by tumours within the skull. Nothing is more usual than for deafness to attend a common cold, and to continue long after its other symptoms are removed. Hearing is often injured by long-continued headachs, by loud shrill noises, and by thunder. It is injured by inflammation arising in consequence of repressed eruptions, of repelled gout, or the stopping of hæmorrhages and issues. The imprudent use of mercury and of cosmetics is thought also to hurt the ear, and to bring on deafness. A violent shock given to the head by going hastily into the cold bath, is a very frequent cause of deafness, which sometimes lasts for a considerable time, even for days or weeks. Local affections of the ear itself are a very frequent cause of deafness. The loss of the external ear greatly injures hearing. If any thing obstructs the outer passage, as a growth, or any solid body getting in, or the wax accumulating, deafness follows. Too little wax is also injurious. Diseases of the membrane of the drum, and of the drum itself, produce deafness. Inflammations, abscesses, and scrofulous ulcers in the inner portion of the ear, are apt to occasion incurable deafness.

Treatment. When deafness proceeds from any general affection of the head or body, our treatment must be directed to the original disease. Inflammation from repelled eruptions will require discharges

from the neighbourhood of the ear, by leeches, cupping, or blisters. Saline purgatives, diaphoretics, and fomentations, will also be necessary. If we can restore suppressed discharges, it ought to be done. Deafness, from injuries of the external passage, is pretty much within our power. If there is an accumulation of wax, warm water, or warm soap and water, is to be thrown in with a syringe; and the surgeon is carefully to break down and extract all the wax he can reach with a small scoop. People should not venture to pick their own ears with pointed instruments. If there is a suppuration or scrofulous discharge, the passage is to be kept clean by the injection of warm watery fluids. In scrofulous constitutions, where deafness is threatened, it is of service to have an issue or drain externally; as there is great danger of inflammation and ulceration extending to the inner parts of the ear, and destroying the small bones there; the consequence of which would be incurable deafness. Other remedies proper in scrofulous constitutions are also to be employed, as exercise, sea-bathing, nourishing diet, and attention to the state of the bowels. When there is a deficiency of the wax, stimulant oils are recommended, as turpentine and the oil of amber. Onions and garlic have also been applied.

Deafness in old people is frequently accompanied with ringing of the ears, and other disagreeable sensations. If the deafness in such persons has been gradually increasing, very violent means or strong remedies are not to be ventured upon. The strength is to be supported by generous diet and tonic medicines, while much attention is to be paid to the state of the bowels; and care taken to prevent any excessive determination of blood to the head. But if the symptoms of giddiness, headach, and ringing of the ears have come on suddenly, if there be flushing of the face and any tendency to fever, these are the marks of impending apoplexy or palsy, and must be counteracted by blood-letting and other depleting measures, without regarding the age or previous apparent feebleness of the patient. Many of the imperfections of the sense of hearing are beyond the reach of medicine. An ear-trumpet is our next best resource.

DEATH may either be the effect of old age, or it may occur at an earlier period as the consequence of disease. As life advances, the various functions, and what are called the various systems of man, the vascular, the nervous, and the digestive, become languid and impeded in their operations. The arteries, which, in the earlier stages of life, were superior to the veins in the density of their coats, and the energy of their actions, gradually lose their activity and power; the nervous system is feeble and torpid; and motion is less easily excited in the muscles by stimuli or by the will. The extremities become cold, and feeling is blunted; the circulation languishes, and the veins are fullest. Ossification takes place in many of the arteries; and mortification from this cause closes the scene. In other circumstances, the activity of the circulating system flags, the blood is confined to the larger vessels, and the heart can no longer contend with the increasing load; or the vital power is gradually sunk in sleep; and at last in death, assuming the form of a deeper slumber. Suffocation, or the rupture of vessels in the head sometimes suddenly extinguishes life. When death occurs at an earlier period, as the consequence of disease, it is from the destruction of some organs essential to life; from the supply of nourishment being totally obstructed, or from the gradual introduction of poison, either undermining the vital powers, or exhausting the strength by the regularly returning paroxysms of hectic. In continued fevers, we cannot distinctly see what particular circumstance causes death; but the most frequent is exhausted strength or an oppressed brain.

The signs of approaching death are, a rapid and very small, scarcely distinguishable pulse, cold extremities, clammy sweats,

the eyes dim, the features sunk, the expression lost, and a hollowness, particularly at the temples; the three last characters constitute the *facies Hippocratica*, so called from its being admirably described by the Father of Physic. All these are signs of a total loss of activity and power in the circulating and nervous systems.

DECLINE. A term very often applied, in popular language, to those diseases which wear out life by long suffering, hectic fever, and great emaciation. Consumption is very frequently called a *decline;* and the wasting of infants from mesenteric fever, from the dregs of the measles, from diseased liver, and impaired digestion, with various other chronic affections of a similar nature, are called by the same name.

DECOCTIONS are certain preparations of medicines and drinks, made by boiling substances in water for a considerable time. On account of the active principles of vegetables being of difficult solution, decoction is necessary at times; but where infusion will extract the virtues we want, it is preferable to decoction; because long continued heat produces a chemical change in some of the substances, and dissipates volatile matter; while substances which are held in solution when the decoction is hot, fall down when it cools. Decoctions should not be boiled longer than is necessary to extract the soluble parts of vegetables; and they should be strained when hot, in order that their active principles may not be lost or deposited during straining. Vegetables should be cut in slices, or bruised into a coarse powder, to facilitate the solution. The decoctions of particular substances will be found under the names of those substances.

DECOMPOSITION. The separation of the parts of a compound substance by the action of other substances, or by heat.

DECREPITATION. A crackling noise made by certain salts when they are put into the fire, or upon hot iron. It is owing to the water of crystallization which they contain.

DECUSSATION. The crossing of nerves or muscular fibres.

DEFLAGRATION. The burning of any substance with an explosion, as nitre, gunpowder, &c.

DEFLUXION. A flowing down of humours, a term scarcely used in modern physiology or pathology.

DEGLUTITION. The act of swallowing. *See* SWALLOWING *and* GULLET.

DELETERIOUS, *destructive* or *poisonous*, applied either to noxious gases, or to substances taken into the stomach.

DELIQUESCENT. A term applied to a salt, which, by attracting moisture from the air, melts; thus, potash, and the carbonate of potash, &c. are *deliquescent* salts.

DELIQUIUM ANIMI, SYNCOPE. *See* FAINTING.

DELIRIUM. The temporary aberration of mind occurring in certain diseases as fever, and affections of the brain; and the concomitant of various accidents, particularly injuries of the head. It likewise attends diseases of extreme debility; and often arises from intemperance in drinking, and other habits of dissipation.

The following excellent account of the gradations of this disordered state of the intellectual functions, is given by Dr. Abercrombie:

"The first mental function which is impaired by bodily disease is usually the power of attention;—this we see illustrated in all febrile affections. The patient, in the early or milder stages, is incapable of fixing his mind upon any thing that requires much attention, of following out an argument, or of transacting business which calls for much thought or consideration. He is acute and intelligent as to all common occurrences, and shows no want of recollection, or of the power of reasoning when his attention is excited; but he feels it an exertion that is painful to him. In a higher degree of this condition, he is still intelligent as to what is said or done at the time, or in recognising persons; but in a short time forgets every thing in regard to the per-

son or the occurrence. He is incapable of that degree of attention which is necessary for memory, though the powers of perception are entire. In the next stage, he becomes incapable of receiving the full impression from external things; and, in consequence of this, he mistakes the objects of his own thoughts for realities. This is *delirium*, and there are various degrees of it. In some cases, the attention of the patient can be roused for a time, and directed to the true relations of external things, though he relapses into his delirious impressions when he is left undisturbed; in others, the false impression is constant, and cannot be corrected by any effort which is made to direct the attention; and, in a third modification of this remarkable condition, he mixes up his hallucinations with external impressions in a most singular manner. He is still capable, however, of describing his impressions, that is, of talking so as to be understood, though what he speaks of relates only to his erroneous conceptions, or mere bodily feelings. In the next stage, he either does not attempt to express himself at all, or is entirely unintelligible. He is now cut off from communication with external things, and with other sentient beings; and the highest degree of this is what we call coma, or stupor, which resembles profound sleep.

"This description refers chiefly to the gradations in the state of the mental functions which we observe in continued fever. It is particularly interesting to trace them in this disease, because we see the various grades passing into one another; and thus showing, in a connected series, the leading peculiarities, which, in other affections, we have to contemplate separately. These peculiarities may be chiefly referred to the following heads:

"I. A state in which the attention cannot be steadily directed to a long and connected train of thought, or to any thing requiring a continued effort of mind. This takes place, as already stated, in the earlier stages of all febrile diseases. It likewise occurs in connexion with the debility which succeeds acute diseases; in persons broken down by intemperance; and in the first approaches of old age. It is also often observed in a remarkable degree in connexion with a disordered state of the stomach.

"II. A state in which the impression made by external things is not sufficient to produce remembrance, though there appears to be, at the time, a perfect perception. A person so affected understands what is said to him, and answers correctly, but very soon forgets what has passed; he knows a friend, and is happy to see him, but in a short time forgets the occurrence. This is met with in a more advanced state of febrile diseases, in the higher degrees of the condition which results from habitual intemperance, and in the more advanced periods of age. It also occurs in diseases of the brain, and in cases of injuries of the head. A lady, whom I attended some time ago, on account of an injury produced by a fall from a horse, lay, for the first week, in a state of perfect stupor; she then gradually revived, so as to be sensible to external impressions, and after some time to recognise her friends. But afterwards, when she was entirely recovered, she had no recollection of this period of her convalescence, or of having seen various friends who then visited her, though, at the time, she recognised them, conversed with them sensibly, and was very happy to see them.

"III. The third condition is that in which external impressions are either not perceived at all, or are perceived in a manner which cannot convey any distinct notion of their relations to the mind. On this account, the conceptions or trains of ideas existing in the mind itself are believed to be realities. This remarkable condition occurs in various forms of delirium, and constitutes the peculiar characters of insanity and dreaming. The ideas or conceptions which occupy the mind in this condition are various. They may be trains of thought excited by some passing event, or some bodily sensation; and frequently the patient repeats something

which is said in his hearing, and then branches off into some other train to which that has given rise. In other cases, the impression is one which has been brought up by some old associations, even relating to things which the person when in health had not recollected. Of this kind there are various remarkable examples on record, especially in regard to the memory of languages. A man, mentioned by Mr. Abernethy, had been born in France, but had spent the greater part of his life in England, and, for many years, had entirely lost the habit of speaking French. But when under the care of Mr. Abernethy, on account of the effects of an injury of the head, he always spoke French. A similar case occurred in St. Thomas's Hospital, of a man who was in a state of stupor in consequence of an injury of the head. On his partial recovery, he spoke a language which nobody in the hospital understood, but which was soon ascertained to be Welsh. It was then discovered that he had been thirty years absent from Wales, and, before the accident, had entirely forgotten his native language. On his perfect recovery, he completely forgot his Welsh again, and recovered the English language. A lady mentioned by Dr. Prichard, when in a state of delirium, spoke a language which nobody about her understood; but which also was discovered to be Welsh. None of her friends could form any conception of the manner in which she had become acquainted with that language; but, after much inquiry, it was discovered, that, in her childhood, she had a nurse, a native of a district on the coast of Brittany, the dialect of which is closely analogous to the Welsh. The lady had at that time learnt a good deal of this dialect, but had entirely forgotten it for many years before this attack of fever. The case has also been communicated to me of a lady who was a native of Germany, but married to an English gentleman, and for a considerable time accustomed to speak the English language. During an illness, of the nature of which I am not informed, she always spoke German, and could not make herself understood by her English attendants, except when her husband acted as interpreter.

"A case has been related to me of a boy, who at the age of four received a fracture of the skull, for which he underwent the operation of trepan. He was at the time in a state of perfect stupor, and, after his recovery, retained no recollection either of the accident or the operation. At the age of fifteen, during the delirium of a fever, he gave his mother a correct description of the operation and the persons who were present at it, with their dress, and other minute particulars. He had never been observed to allude to it before, and no means were known by which he could have acquired the circumstances which he mentioned." (Dr. Abercrombie *on the Intellectual Powers.*)

There are certain cases in which delirium portends very great danger; at all times, it is an unpleasant symptom; and one which is very distressing to the friends of the patient. It is a very common symptom of low nervous fever; and, in severe cases, it pervades all the later periods of that disease. In agues, it does not often occur, though in the severer cases there is considerable confusion of thought. When it occurs in inflammation of the lungs, at an early period, it is one of the worst symptoms that can happen. It is a symptom that occurs in diseases of high excitement, and also in diseases of debility; whether this debility be a prominent symptom from the first, or be the sequel of a strong inflammatory action. There are few cases in which we should attend to the delirium as a primary symptom; the leading disease must be cured, and the delirium will cease of itself. In various kinds of fever, and in various stages of the same fevers, the cessation of the delirium is the consequence of very different applications and modes of treatment. In the early stages of fever, in inflammation of the brain, delirium may be expected to cease on the vigorous employment of the antiphlogistic plan, copious blood-letting

the application of cold, purging, and the strictest attention to rest and quietude. On the other hand, at the advanced period of continued fever, with low muttering delirium, the patient may be roused from his stupor, by questions distinctly put to him, by being allowed to see the objects in the room about him; and by the use of strong stimulants, as wine, spirits, ether; and opium so managed as to produce not its narcotic, but stimulating effect. In the diseases of childbed, delirium is always an occurrence much to be deprecated; and the mode of dealing with it in such cases, may be gathered from what has been mentioned above. We must try to diminish excitement where it is too great; to rouse and interest the feelings where the debility is evident; and it may be wise to admit the short visits of judicious friends; and to present the child to the mother in the melancholy case, when the instinct of maternal affection appears for the time suspended. The delirium of typhus sometimes lasts long after every other bad symptom is removed, so that we might be led to fear there is permanent derangement; but in time, the intellect is completely restored; and the same may be said of the derangement which sometimes follows delivery; though the period of recovery is often delayed, and many months of anxious expectation are passed by the friends of the patient.

DELIRIUM TREMENS. This is a singular affection, which has but lately been accurately described by medical writers, and has not yet got an English name. Physicians term it *Delirium Tremens*, from the aberration of mind, and the universal shaking of the body which characterise it.

Symptoms. "The attack of this complaint is more or less sudden in different instances. Sometimes for a few days at its commencement, the patient is merely incapable of his ordinary duties and exertion; a constant restlessness, debility, and inappetency, and occasional vomiting take place, with dulness and dejection of spirits, and headach; in a short time, confusion of intellect, a staring wildness of the countenance, tremor of the hands, and in some degree of the whole body, succeed. The pulse is not so frequent as in the delirium of fever, nor so full and strong as in inflammation of the brain; it seems to participate in the universal hurry and tremor. The tongue is usually moist; and there is little thirst or heat of skin. The bowels are generally, though not invariably, open. Occasionally the patient recovers without farther aggravation of symptoms: but too frequently, the disorder becomes more violent, the countenance becomes more anxious and wild; the tremors assume the aggravated character of twitching of the tendons, and the confusion of ideas is displayed in total forgetfulness, in complete alienation of mind, and unrestrained delirium. The pulse is at length very frequent, but cannot be distinctly felt on account of the general tremor. Still the tongue remains moist, there is little thirst, and the skin is quite cool, sometimes with a clammy perspiration. In the violence of the symptoms, there are sometimes involuntary evacuations. The duration of these symptoms is various; they rarely continue in the degree of violence described for more than a few days; but in a milder form, they sometimes endure for some weeks."—*(Edinburgh Medical Journal*, 1813.*)*

Diagnosis. Delirium tremens is distinguished from inflammation of the brain by the violence of the fever being less, and by its not being attended with the same intolerance of light and sound; the tremor, and the state of the pulse and skin further distinguish it from inflammation of the brain. Nearly the same circumstances distinguish delirium tremens from nervous fever with delirium. There is greater difficulty in making the distinction between this complaint and mania. The exciting cause, and the length of its duration, are our chief, but unsatisfactory marks.

Causes. Delirium tremens occurs principally in those who are addicted to the

use of spirits, in consequence of excess or habitual indulgence in them.

Treatment. Opium is the remedy on which we chiefly rely. It soothes the agitation of body and mind; and when sleep is induced, the patient awakes refreshed and composed. It is to be given in full doses every second hour, till it produces its effect; fifty drops of the tincture, or two grains of the solid opium, and this repeated four or five times. For some nights after the disorder is abated, opium is necessary at bed-time. Cold may be applied to the head. Blood-letting is seldom proper; and even very robust patients seem to be the worse for it. Purgatives may be required to counteract the constipating effects of the opium, but not as a means of curing the disease. Blistering should be totally avoided, as it only adds to the irritation.

DELIVERY. When the different stages of labour are completed, and the child and afterbirth are expelled from the womb, the woman is said to be *delivered.* There are many things to be done, and many to be avoided at this period; and as much of them will require both to be directed and executed by non-professional persons, it may be useful to give some directions for the treatment of women after delivery.

Treatment of Women after DELIVERY. When the afterbirth has been expelled, and when the practitioner has ascertained, by putting the hand upon the belly, that the womb is emptied and is contracting properly, the woman should be allowed a few minutes of repose; and, unless there be any feverish or other unfavourable circumstances, a little cordial made of wine and water, or spirits much diluted, or twenty-five drops of laudanum in cinnamon-water, may be allowed. If she be not greatly fatigued, she is to turn slowly on her back, a broad bandage is to be put under her, and pinned evenly on the belly, with such a degree of tightness that she may feel a moderate support to the body. This is necessary to compensate for the great distension which she has borne so long, and which is now so suddenly withdrawn. Whatever is wet and uncomfortable, and can be easily taken away, is to be removed; and when this is difficult, some dry flannel is to be placed next the body. An open flannel petticoat is to be put in, and fastened like the binder. A soft cloth is to be applied to the parts, and the woman may lie in any posture she finds most comfortable. A little panado without wine or spirits, may be allowed if she desires it; and she may be left to rest, after the practitioner has made himself sure that there is no flooding, external or internal; that the after-pains are not very severe, and that the binder is of a proper tightness. It is desirable that the urine should be passed within twelve or fourteen hours after delivery; and if it is not done naturally, assistance must be given, either by diuretic medicines or otherwise. It is always proper to attend to the state of the bowels, and to take care a motion be procured not later than forty-eight hours after delivery. If medicines be required, there is nothing better than cold-drawn castor oil; and a dose of this may be necessary every two days, till the bowels become regular.

There are some things which attendants, friends, and patients, are too apt to do, but which should be carefully avoided. The patient should not be completely shifted, as is too often done, by raising her to the erect posture. Fainting or flooding may be the result of this imprudent conduct. A very moderate cordial, as a little wine and water, may be allowed after the necessary fatigues of labour, but it is an injurious practice to give brandy, strong spirits, and heating spiced liquors. The temperature of the room should be kept moderate, and large fires and loads of bed-clothes should be avoided. A crowd of people, noise, whispering, talking, and officious meddling with the patient, should be strictly forbidden.

Diet. The diet of women, after delivery, should be particularly attended to. For the first five or six days, all heating and stimulant food, and in general, all so-

lid food should be forbidden, as such diet is very apt to bring on inflammatory complaints. If the woman is not to nurse, she should avoid liquids as much as possible, and rather take a little fruit, ripe or preserved, to quench the thirst. If she is to nurse, she may have a little tea and panado for breakfast, and a little weak chicken-broth or beef-tea with toasted bread for dinner; but for some time malt liquor should be avoided. In the course of a few days, a little wine may be allowed; but not red wine, as it is apt to stop the cleansings. In about a fortnight the patient may have a little ale or porter, if she suckles the child; and by degrees may return to her ordinary diet. All drink taken in the first days after delivery should be somewhat heated.

Rest and quiet should be strictly enforced; no visitors should be admitted for a fortnight or three weeks, both to secure the mother from fatiguing herself by talking, and from hearing any thing that might agitate or distress her mind. The air of the room should be kept cool and fresh, by opening the bed-curtains, excluding visitors, and removing every thing that would taint the air. The bed should not be made too soon, seldom before the end of the third day; and at first, it will be better that the woman be not allowed to sit up, but kept half sitting, half lying, when she is out of bed, for the first two or three times of rising. While the cleansings continue, very little exertion should be used; no going about the house, and hardly from one room into another; but after the second week, she may be out of her room for a considerable portion of every day, provided she very frequently uses the reclining posture. Great care should be taken on the first going out; it should be for a very short walk, or for an airing in a carriage; and the time and extent of exercise should be gradually enlarged as the patient becomes conscious of returning strength. *See* LABOUR.

DELIVERY, INJURIES FROM. 1. The womb, in former times of ignorance, was sometimes *inverted* by rashly pulling at the navel-string before the afterbirth was sufficiently detached. If assistance be procured in time, it may be replaced; but when this is too long delayed, the case may prove fatal very soon, or a bloody discharge may continue for a considerable time, and at last destroy the patient. When the inversion of the womb is so complete that it is torn away from its internal attachments, immediate death is generally the consequence. But inversion of the womb may always be prevented by avoiding all rash attempts to extract the afterbirth, before it be completely separated. 2. *Great stretching of the parts.* This occasions great soreness, and uneasy feelings, which are best removed by bathing with warm milk and water. If there be much swelling, an emollient poultice of bread and milk, or linseed meal may be applied, and frequently renewed. If there be general uneasiness, with heat and throbbing pain in the part, leeches may be necessary. 3. *Laceration.* The division between the vagina and rectum is sometimes torn. When this is not very extensive, it generally gets better merely by rest and the ordinary management after delivery; but when more considerable, a communication is formed between the gut and the vagina; this requires the assistance of a skilful surgeon. 4. Sometimes the *urinary bladder is injured,* either by the use of instruments, or by allowing the child's head to be wedged too long in the bones. The disease may be mitigated if taken in time; but, when long delayed, the consequences are very deplorable. Contrivances must be adapted to prevent the continual draining off of the urine.

DEMULCENTS are those medicines or drinks of an oily or mucilaginous nature; which are given with the intention of applying a smooth protection to parts, which are likely to be irritated by the presence of acrid matters. Thus the throat and passage to the windpipe are intended to be shielded by demulcents, from the thin sharp matter which excites the tickling cough in a common cold; and oily demulcents are given to protect the bowels

from irritating substances passing from the stomach, when we have reason to fear that the natural mucus which lines them is deficient in quantity. The principal demulcents in use are, the solution of gum arabic, either alone or with some cinnamon-water to diminish its insipidity; solution of gum tragacanth, linseed-tea, liquorice-water, decoction of marsh-mallows, isinglass; or the oily substances, olive oil, almond oil, &c. formed into emulsions. Water-gruel, barley-water, and similar matters are also to be reckoned as demulcent drinks.

DENTIFRICES. Substances used for cleaning the teeth, most commonly those which are in the form of powder. Of these, there is a great variety, as almost every dentist has his own favourite tooth-powder. Charcoal is much esteemed by some, as it not only cleans the teeth, but is supposed to assist in removing the bad smell from the mouth. In the East Indies, the betel nut is burned to procure a very fine powdered charcoal. It has, however, the disadvantage of producing a bluish discolouration of the gum, which extends along the edge, and has somewhat the appearance of tattooing, as practised on the skins of the savages of the islands in the Southern seas; like tattooing, it is quite indelible. Charcoal seems also to act too severely on the enamel; for we have seen many cases where, after the continued use of it and of hard brushes, the enamel has been cut into grooves as with a file; and it is well known that, from its triturating power, it is used by blacksmiths in polishing steel, to take out the file marks. Magnesia, prepared chalk, powder of cuttle-fish bones, orris-root, and similar substances, may be used with safety and advantage, either singly or combined. The following is one of the best receipts for tooth-powder: Take of prepared chalk six ounces, cassia powder half an ounce, orris-root an ounce. These are to be well mixed, and may be coloured with red lake, or any other innocent substance, according to the fancy of the apothecary or the user. This dentifrice is to be used with a firm brush every morning, and the teeth should also be brushed before going to bed; but it is seldom necessary to use powders more than once a-day.

DENTIST. A medical practitioner, whose attention is chiefly directed to the teeth and neighbouring parts. There are many circumstances relating to the growth and preservation of the teeth, which are highly conducive to health, comfort, and personal appearance. Physicians and general practitioners commonly disregard this branch of the medical art, and leave it to those who devote themselves exclusively to it. As it is a province very tempting, and thought to be easily accessible, it has, more than any other division of surgery, been invaded by ignorant pretenders, who endeavour to make up, by their forwardness and confidence, for their want of knowledge and medical skill. Limited as the task of the dentist appears, it ought never to be undertaken by any who have not received a full medical education; as the disorders occasioned in different parts of the system by maladies of the mouth, the fauces, and the teeth, require great skill and judgment in their treatment; and the operations on the mouth, and their consequences, frequently require the promptitude and boldness of an experienced surgeon. Patients, therefore, should be careful to whom they entrust the care of those important parts.

Much evil may be prevented to the youthful constitution, by frequently submitting the teeth and gums, during the coming in of the second set, to the inspection of the dentist. Sometimes the first set of teeth remain too long, and do not allow space enough for the second set to come in regularly. Sometimes these grow too fast, and crowd upon each other; and sometimes, from constitutional or local disorders, the teeth have an unpleasing and unhealthy appearance. Of the propriety of the removal of obstructions, or of mechanical contrivances to keep the teeth in the proper direction, or of administering remedies for the constitution, the skilful

dentist is the proper judge. Another circumstance which is to be corrected by the dentist, is the deposition of the crust called *tartar*, which seems to have its origin from the salts contained in the saliva, and which in some persons covers the teeth to a great thickness. When the mouth has been long neglected, it frequently collects to such an extent as to separate the gums from the teeth, and render these loose and tender: it should therefore be removed by instruments, and its growth must be prevented by frequent washing, brushing, or spunging of the teeth, with water or proper dentifrices. To the dentist also, peculiarly belongs the management of the very distressful disease, toothach; and this, whether it arises from decaying of the teeth, or from rheumatic affections of the parts in the neighbourhood. A great deal may in many cases be done by art, to arrest the progress of decay, by cutting out the diseased part of the tooth, and by filling up the hollow with metallic substances; which operation is called *Stopping*. Much grievous suffering might be avoided, and many valuable teeth preserved, by a timely application to the dentist; but the bulk of patients think it time enough to apply to him when they have suffered from pain, whereas it is only at the commencement of decay, and before severe pain has been felt, that stopping can be of use; but when it is performed under favourable circumstances by a skilful operator, it is a most satisfactory operation. We have seen many teeth that have been preserved by it for upwards of twenty years. Much may be done also for the front teeth, by the judicious use of the file. When extraction is necessary, it should be done by a practised hand. *See* TEETH.

DENTITION. *See* TEETHING.

DEOBSTRUENTS. Medicines that are supposed capable of removing the thickened state of certain organs, which obstructs the free passage of blood through them. If there is such a thing as a deobstruent medicine, mercury alone seems entitled to the appellation; as it often displays a remarkable power of removing hardness of the liver and other organs, when the system is brought under its influence.

DEPILATORY. An application that removes hairs from any part of the body, as the pitch-cap removes the hairs of the scalp. Certain quack medicines, chiefly of arsenic, are sold for removing superfluous hairs, but they are very dangerous.

DERIVATION. A term formerly much used in medical speculations, but now discontinued. It signifies the withdrawing of humours or of disease from one part, by causing a discharge at a more distant one.

DESQUAMATION. The falling off of the cuticle like small scales. This takes place at the termination of scarlet-fever, measles, and some other diseases of the skin.

DETERGENT. Having the property of cleansing or purifying; sometimes applied to lotions for the skin, but without just cause; and in old surgery, applied to medicaments which were thought to have the property of cleaning ulcers, and bringing them to a healing state.

DETONATION. The term applied by chemists to the exploding of certain substances, with a loud noise, as the detonation of fulminating gold, &c.

DIABETES. The name of a disease in which the urine is exceedingly increased in quantity, becomes of a sweet taste, and contains a great portion of sugar. There is great thirst and a voracious appetite, with wasting of the body; and the quantity of the urine far exceeds the food and drink taken in. Young persons are rarely attacked with this disorder. The most frequent subjects of it are those in middle age or in the decline of life, or who have made a free use of wine in their earlier years. It happens to persons of both sexes; and it is not easy to point out any particular constitution that is subject to it, or to say that any other disease is a forerunner of it. Dissection throws little light on the nature of this complaint; but it is believed to be owing

to a diseased action of the kidneys. Diabetes comes on insidiously without any previous disorder; it may continue for a long time without much emaciation; and it is commonly the great thirst and voracious appetite, that first call attention to the disorder that is going on in the system. Sometimes, in the progress of the disease, the stomach is considerably deranged, and the skin becomes dry, parched, and scaly; and there is a sense of weight and pain in the urinary passages. When the disease has continued long, there is extreme emaciation, debility, and the usual symptoms of hectic fever.

Treatment. The plan of cure in this disease is as difficult and uncertain as its theory; and many methods have been proposed, and abandoned for others. One plan has been, to procure a discharge from other organs than the kidneys; hence emetics and diaphoretics have been recommended, and blisters have been applied to the lower part of the back. Tonic medicines have been advised, as iron, myrrh, and bark; and some have been thought to derive much benefit from the Bristol Hot-well; and where these cannot be used, lime-water has been given. Some have employed large doses of opium; and though this is not to be depended upon alone, it may assist more promising methods of treatment. Riding on horseback, and friction over the region of the kidneys, have also been recommended. All these remedies very often fail; and the most approved plan at present is to throw in as much animal matter as possible into the system, to withdraw the materials for the large production of sugar, to prevent the skin from absorbing fluids, and to diminish the secretion from the kidneys. For this purpose, the diet is to be composed entirely of animal food, and this even approaching to rancidity; large quantities of pork, smoked beef, salt herrings, dried fish, eggs, &c. and a total abstinence from all vegetable diet. The skin is to be anointed with hog's lard; exercise is to be avoided; an issue is to be made in the region of the kidneys, and the bowels are to be kept open by the common aloetic pill. Water impregnated with the hepatic gas or hydrosulphuret of ammonia is to be given, in the dose of four drops three or four times a-day, and this is to be gradually increased till a slight giddiness is produced. The use of the nitric acid, in the quantity of one to three drachms, in two pounds of water daily, is also recommended. Under this method of treatment, several unpromising cases have got well; but it is necessary that the diet, however disgusting, be rigidly persevered in. When the excessive appetite and thirst abate, when the urine is diminished, and its saccharine properties disappear, we know the disease to be yielding; and a gradual admixture of animal and vegetable food may now be ventured upon, with an allowance of wine or porter. The use of bark and other tonics must be continued, and attention paid to the bowels. The disease has very rarely been cured; the cases which seemed to do best, were those which were treated with the animal diet, and the frequent exhibition of Dover's powder.

Another plan of a very different kind has been proposed for the cure of diabetes, on the supposition that the increased secretion from the kidneys is a proof of inflammation taking place in them. This plan is to employ copious blood-letting. Certainly cases have occurred in which this treatment has appeared to do good; but it seems one of considerable hazard, especially in the enfeebled subjects, who are sometimes attacked with this singular and intractable disease.

DIACHYLON. The plaster known in the pharmacopœia by the name of *Emplastrum oxydi plumbi semi-vitrei*, and *Emplastrum lythargyri*. It is made of litharge and olive oil. It is a common application in excoriation of the skin, and for retaining the edges of fresh cut wounds together. It keeps the part warm and defends it from the air. Diachylon forms the basis of various other plasters, as those

of assafetida, opium, galbanum, and the adhesive plaster.

DIAGNOSIS. The power of distinguishing one disease from others resembling it. A very slight reflection will show the importance of making an accurate distinction between similar diseases. Without sagacity and attention to this point, the practitioner may be guilty of the most fatal blunders, and may prescribe opium and stimulants where depletion and sedatives are necessary. Empirics and non-professional people, by their inattention to diagnosis, prescribe the same remedies in a great variety of different, and even opposite diseases. To form an accurate diagnosis is often one of the most difficult duties which the physician has to perform; and one which is calculated to call into exercise all the skill he has acquired by his learning, talents, and experience.

DIAMOND. This precious stone has been ascertained by modern chemists to consist of pure carbon, and to form carbonic acid by being burned in oxygen gas.

DIAPHORETICS. Medicines which promote the perspiration gently, without going the length of sweating; the medicines which promote this being more correctly termed *sudorifics*. These last, by being given in smaller doses, may be made to act as diaphoretics. In many diseases, restoring the perspiring functions of the skin, and bringing out a gentle moisture, is both an evidence and a cause of the disease yielding. In febrile cases, the skin is dry and parched, and the stomach will retain nothing; but if we can procure a gentle perspiration, the fever will abate, and medicines will no longer be rejected by vomiting. We are to be directed in our choice of diaphoretics by the particular symptoms present; thus, if there is great sickness, we would attempt to promote our object by giving medicines in small bulk, as opium and camphor in a pill or small bolus, one grain of opium to three of camphor; or we would give the saline effervescing draughts, which we expect both to stop the vomiting and to determine to the skin. If there be no vomiting, we may give very small doses of tartar emetic, as one grain dissolved in three ounces of water, of which solution a table-spoonful is to be given every two hours; and another diaphoretic is, small doses of Dover's powder, as five grains every three or four hours. Keeping warm in bed, and drinking frequently of warm gruel, is an effectual and safe method of procuring perspiration in many cases. A good diaphoretic draught may be made with twenty-five drops of tincture of opium, with forty drops of wine of antimony or ipecacuan, in an ounce of any convenient fluid, and given at bedtime.

DIAPHRAGM. The muscular and tendinous expansion which divides the cavity of the chest from that of the abdomen; and which is one of the principal agents in respiration. When the breath is drawn in, the diaphragm is brought to a flattened position, and nearly horizontal; and when the air is expelled, the contents of the abdomen push the diaphragm so as to make its middle part convex towards the chest. There are certain perforations in the diaphragm, to allow a passage for the tube that conveys the food to the stomach, for the great bloodvessels, and for certain nerves. On the abdominal side, the liver is closely attached to a part of the diaphragm. The diaphragm is subject to inflammation and other diseases; it is a convulsive motion of it that gives rise to hiccup; and in some rare cases, part of the abdominal bowels have been pushed through the diaphragm, giving rise to an internal hernia.

DIARRHŒA, OR LOOSENESS OF THE BOWELS. A disease consisting in more frequent and liquid evacuations by stool, than usual. It is distinguished from dysentery, by the absence of painful and ineffectual straining, and by the stools not being of a mucous kind; and from cholera, by the feculent nature of the evacuations in diarrhœa, by the absence of vomiting, and by the circumstance of cholera being generally brought on by the

whole system having been long exposed to great heat of weather.

Causes. The causes of diarrhœa are many and various. 1. Cold applied to the whole body is not an unfrequent cause, and cold applied to the feet alone, in very many cases, produces diarrhœa. 2. Diseases of other parts of the body give rise to diarrhœa, as happens to infants while teething, and to persons who have a paroxysm of gout. 3. Certain emotions of the mind are known to cause diarrhœa. 4. Certain articles of food taken into the stomach produces looseness. 5. Certain secretions of the body itself poured into the intestines, cause a laxity of them.

Looseness *should not be rashly checked.* From the great variety of causes inducing diarrhœa, it must be obvious that it would be impossible to lay down any plan of cure that would apply to all cases, and it is often a matter of doubt whether it should be meddled with at all: thus, when from a surfeit, either in quantity, or from taking improper articles of food, a diarrhœa is produced, a wise physician will consider it as a salutary effort of nature to get rid of what would be noxious if retained; and he will allow it to go on for a time, taking care to watch that it do not come to excess. Thus, too, if a plump full child, getting its teeth with difficulty, should be seized with looseness, no prudent person would hastily check this, knowing that it is highly salutary in taking off irritations from the brain, and in preventing an undue flow of blood to that important organ. Thus, too, if a person labouring under inflammation of the eyes, or subject to disorders of the head, should be seized with diarrhœa, so far from thinking to check it, we should be inclined to *make* a diarrhœa by the use of medicines.

Treatment of Looseness. Still, however, there are cases where diarrhœa is troublesome, dangerous, and requiring to be stopped; and of these we are to give some account. If a person finds himself affected with diarrhœa from cold, he is to use warmer clothing, to avoid cold to the feet, especially with damp; and after a few evacuations, to take some of the chalk mixture, with or without a little of the tincture of opium. If the disease does not yield to this, he is to take some mild but effective purgative medicine, as castor oil, sulphate of magnesia, or compound powder of jalap, in order to remove any acrimony that may be keeping up the discharge; and after its operation, he is to quiet the whole by a full dose of opium, either in the form of pill or tincture. When diarrhœa arises from improper food, it is still more necessary to get rid of the offending matters; and purgatives are to be given, if the body does not seem able to relieve itself, which may be known by the disagreeable putrid belchings, continuing for some days after the improper food has been taken. When the bowels have been sufficiently evacuated, either by their own efforts or when aided by medicine, it will be proper to give opiates, or the chalk mixture, or the tincture or infusion of catechu; and where there is great laxity of the bowels, long continued, and occasioning considerable debility, it may be proper to give the powder or tincture of rhubarb, to endeavour to restore the tone of the bowels. In diarrhœa, we are not unfrequently obliged to have recourse to sedative and astringent injections, composed of a small tea-cupful of thin starch, and a tea-spoonful of laudanum, or four ounces of the infusion of catechu, or of kino. In the diarrhœa of children, the chalk mixture is perhaps the safest thing we can employ; but we must likewise, in obstinate cases, have recourse to tincture of opium and rhubarb, and also to the anodyne injections.

When diarrhœa is symptomatic of other diseases, we must consider whether it be most prudent to attend to the primary disease, or to use remedies to check the diarrhœa; and there are certainly many diseases in which this symptom requires to be checked. We should not suffer a patient in dropsy, in diabetes, or in fever, to have his strength irreparably injured by a wasting diarrhœa; and at the melan-

choly close of consumption, it is one of our principal objects, though too often unsuccessful, to stop what has been called the colliquative diarrhœa. A great variety of methods have been tried for this purpose; all have failed; but the acetate of lead with opium, in the dose of two grains of the acetate to one of opium, has seemed to answer better than any thing else, and no particular inconvenience has followed from the lead.

DIARRHŒA OF INFANTS. *See* LOOSENESS.

DIASTOLE. The action of the heart when its cavities expand to receive the blood; opposed to *systole*, the motion by which they expel it again.

DIATHESIS. The state of the constitution: we speak of the inflammatory *diathesis*, or that state in which the system is prone to inflammation; or the hydropic *diathesis*, when there is a tendency to dropsy.

DIET. Under the term DIET are to be considered those articles, both solid and liquid, which furnish nourishment to mankind; and also those substances which, though in themselves incapable of nourishing, are useful and even necessary to be added to the food, as salt, spices, and other seasonings. It may appear superfluous to lay down any rule respecting diet, when we reflect on the countless millions who, led by instinct, or determined by situation and circumstances, use every variety of food, both with respect to kind and quantity; but it is nevertheless of consequence to know the effect of particular plans of diet, and even of individual substances, as much good or evil may be induced on the constitution by certain modes of living.

If it is necessary to be exact and particular about the kinds and quantities of medicines, it is not less so, to be exact with respect to the diet both in health and sickness. As Huxham observes, it is preposterous to be minute in what we swallow by grains and scruples, while we are incautious in what we swallow by ounces and pounds. A patient may be admirably treated by his physician, and yet lose all the benefit of his skill and care, by the ignorance and obstinacy of himself or his attendants, with respect to diet.

Diet may be considered as including all that part of the medical art which gives directions respecting food and drink, whether for the preservation of health, or the cure of diseases. The diet is derived from the animal and vegetable kingdoms, from each of which a numberless variety of articles is procured. By the art of cookery, these are varied and combined in an infinite diversity of ways. It is sufficiently evident by the structure of the teeth of man, of his stomach and bowels, and of all his organs subservient to digestion, that nature intended him to live on food of both kinds, vegetable and animal; and his limitation or abstinence from the one or the other, is to be regulated solely by his convenience, and by the effect which he finds the different sorts of food to produce on his constitution. Animal food, being already in great measure prepared and rendered similar to our blood, requires less exertion of the digestive powers; but it is found to be heating and stimulating, and hence it should never be used in inflammatory diseases, or made the principal diet in hot climates. Hence the northern nations are benefited by a considerable proportion of animal food, and the nations between the tropics live much on vegetables. There may be certain diseases and habits of body where it may be useful to take a great deal of animal food, but this should be considered as a necessary remedy, and be always under the direction and superintendence of the physician. With respect to the solid or fluid nature of diet, we may remark, that it is necessary to healthy digestion, not only to have a proper quantity of nutritive matter given to the stomach, but that there be a considerable bulk to give that organ a proper degree of distension; it is therefore necessary to add to soups and jellies, some bread and other matter to give them bulk.

Of the DIET *proper for different ages.* The infant is provided by nature with milk for its nourishment, and farinaceous food may be properly conjoined with it. Little else is required till after the ninth or tenth month. Preparation may now be made for weaning, by giving the child, with his farinacea, a little animal food, as the juices of veal or chicken, or lean beef. If the mother's milk evidently disagrees, and if the farinaceous food produces sourness and flatulence, the nurse must either be changed, or a proportion of animal food, as gravy or beef, must form a great part of the diet. When the teeth have come in, children have a desire for other food, and are pleased to exert their powers on soft bread or a bit of meat; and this may be safely allowed to healthy children. While children are growing, they have very frequent craving for food, and their stomachs have wonderful powers with respect to the quantity they are able to digest. The best proof of the quantity not being excessive, is the growth and healthy appearance of the child, his being lively and active at play soon after his meal, and his sleep being easy and uninterrupted. It may be plausibly urged as the dictate of nature, that we should not hinder children from eating as often as they choose, and at whatever periods. But as the mind and body must be brought under many restraints, if we wish for our offspring either good morals or a good constitution, we are inclined to recommend the early formation of regular habits in the period of taking food. If children are allowed to call for food and drink at every half hour when they are idle, and fancy they want them, a very bad habit of indulgence will be induced; and as we can never be sure of the quantity and kind of the food which they take in, we may expect some morbid changes to take place in the digestive powers. The regulation of the quality of children's food is of the utmost importance. It is there, more than in quantity, that indulgent parents are apt to err. Sweet meats, butter, pastry, high-seasoned dishes, and a great variety of them, ought not to be allowed to children. Their unsophisticated instincts do not desire these things, and if they were carefully kept from them, or resolutely denied them, we should consult at once their health and their character. Water, or occasionally small beer, should be their only drink. A habitual allowance of wine, except as a medicine, should be strictly forbidden; and much more, ardent spirits in every shape. Sauces and condiments should rarely be taken by children and young people.

At a more advanced period, as from eighteen to sixty, if the health be good, there is scarcely any rule to be given for diet, except to enjoin moderation. It has been plausibly enough inculcated, that we should confine ourselves at dinner to one dish only, whether it be of fish or other animal food. Undoubtedly, this is an excellent advice, conducive both to health and temperance, provided a person finds that his digestion goes on properly; but many experience, that their stomachs agree best with some variety in the articles of their food, provided that the quantity taken be not too copious. The drinks that may be used by adults are very numerous; some of them have their advantages, others their inconveniencies. Water, for the healthy and active, is the drink prescribed by nature, and will never injure them; and it is happy for any individual to be quite independent of any other drink. But amid the great variety of other fluids which Providence has bestowed on the industry of man, there are many that agree well both with the palate and the constitution, and which, when not taken in excess, or at improper times, contribute much to his health and comfort. Good small beer is an excellent drink; its slight bitterness assists digestion, it is cooling and antiseptic, and it, in some cases, tends to keep the bowels easy. By those who are troubled with flatulence it should be avoided. Ale and porter are considerably nutritious, and should be avoided by those who are inclined to become corpulent, and who take little ex-

ercise. Wine is to be preferred to spirits, even when they are much diluted. Though there is much spirit in some wines, yet they contain extractive matter and mucilage, which hinders the spirit from producing the bad effects which it would do in the same quantity obtained by distillation. Though we cannot wish to encourage the use of ardent spirits, we admit that with very many persons, they do no harm when taken in small quantity; but the compendious drunkenness which they produce, presents an overpowering temptation to the vacant and unprincipled mind to exceed the bounds of moderation; and when these are habitually passed, the character and health may be regarded as being in the most imminent danger. The different kinds of spirits, brandy, rum, gin, &c. agree in their general effects; brandy is best for weak stomachs, and gin for those who require the kidneys to be stimulated; but when those or the neighbouring organs are irritable, gin is better avoided.

In old age, the diet ought to be less heating than in the vigour of life. The quantity of animal food should be diminished, and the stomach should not be overloaded with a variety of high-seasoned food and dressed dishes. Though the relish for wine is less, it should be continued, in moderate quantity, for its cordial effects.

Diet *in different Climates.* In tropital climates, the perspiration is abundant, and the fluids are acrid. A copious diet of animal food would therefore be improper, and would predispose the system to inflammatory and putrid diseases. Nature has therefore bountifully supplied warm climates with the most delicious cooling fruits, as the orange, the lemon, the pine-apple, the mangostein; and as the heat debilitates the digestive powers, she has also made the tropical regions the birth-place of the spices and aromatic condiments, which so materially assist in the process of digestion. A caution has very properly been suggested on this subject by Dr. Parr "If the stranger to tropical regions indulges in fruits when he first goes to them, he will find himself in error. Old habits are not easily conquered, and the constitution will not change at once with the climate. The bile soon becomes more acrid; and this, with fruit in excess, occasions cholera or bilious fevers. Some proportion of the usual stimuli are also essential, and the spices, with a moderate proportion of wine, are at first necessary. When the constitution is more accustomed to the climate, he may indulge more freely, but excess in hot climates should be avoided." From personal experience, we can bear testimony most cordially to the truth and judiciousness of these observations. The diet in colder climates should be more generous and nourishing; spices and wine are proper; and in the bleak and mountainous parts of our Caledonian regions, the inhabitants use with impunity a quantity of ardent spirits, which appear enormous to their southern visitants.

Of the Times of taking Food. The various occupations and circumstances of mankind, render it impossible and useless to lay down any general rules for the periods of taking food. Reason would dictate very different modes and times from those which fashion and custom have prescribed. The hour of rising should be six or seven, and breakfast should be taken about two hours afterwards. With many persons the powers of the constitution are languid and feeble; and even at the end of two hours they have little appetite for breakfast; while others are recruited and invigorated by a moderate meal very soon after rising. The breakfast should be substantial, in proportion to the labour to be undergone during the early part of the day; and in proportion to the time that must elapse before food can again be taken. The best time of taking the principal meal is between one and two; but the necessities of business, and the mandate of fashion, have rendered this impossible for any but the labouring classes; while those employed in all the varieties of mercantile occupations, and who must make their hours to suit

the convenience of the higher ranks, are obliged either to fast till four or five o'clock, or be content with a hasty luncheon. Those who have their time more at their own disposal, make their luncheon a plain but copious meal; and in such, it would be a wise plan to dispense with the late dinner altogether. As it is, they either make it a supper, for which it is by far too copious and too stimulating; or if they do not retire to rest for five or six hours after dinner, they are over-excited by the wine and stimulants they use, or by the hot and crowded rooms which they frequent: hence the constitution is exhausted, and the orderly and healthful plan of life is totally inverted. Retiring to rest with the stomach loaded with a hearty meal, is a sure way of occasioning feverish restlessness. Copious suppers are therefore to be avoided; and some light food near bed-time is to be preferred.

Consequences of Errors in DIET. To enumerate all these, would be to give a list of the greater number of diseases which afflict humanity. In early life, the state of the stomach, of the chylopoetic viscera, and of the bowels, is so delicate and easily disordered, that a great proportion of the diseases of children may be traced to errors in their diet. To these we ascribe their green and sour stools, their flatulence and griping pains, their skin-diseases, and sometimes water in the head and convulsions. In more advanced life, irregularities in diet, and habitual indulgence in too much and too luxurious food and drink, lay the foundation for gout, liver-disease, dropsy, apoplexy, palsy, stomach complaints, and the long train of what are called *nervous* diseases. Occasional excesses in eating occasion colic, diarrhœa, sick headach, apoplexy; and a debauch in drinking too often destroys life, or brings on madness.

Of the DIET *in Sickness.* The regulation of the diet in disease is a matter of primary importance. In many diseases, health may be restored by abstinence, or a properly regulated diet; and in others, the resources of physic will be unavailing if the diet be not carefully attended to. In fever, there is commonly an aversion to food, which the stomach could not digest, and which would only act injuriously on the system. In many inflammatory diseases, the same salutary instinct occurs: but in some there is no dislike to food; and the friends of the patient supposing him to be weak, give food or stimulating drinks, with the certainty of aggravating the disease. In the great majority of diseases having febrile symptoms, a spare diet and abstinence from wine, porter, spirits, and the like, are absolutely necessary. In chronic diseases, and those attended with debility, a more generous diet is to be allowed. In stomach complaints, the most important part of the physician's office is to regulate the diet. In the puerperal state, the recovery is essentially aided by avoiding all irregularities in food and drink; while the most dangerous and fatal disorders are brought on by imprudent indulgences. We have given, under the various diseases in different parts of the work, particular directions for diet in those cases where the consideration of this subject is essential.

DIET *of Convalescents.* Great attention is necessary in regulating the diet of those who are recovering from sickness. After a long and debilitating illness, the convalescent's appetite is sometimes keen, and even voracious; but it is highly dangerous to indulge this appetite, or to comply with the kind wishes of his friends, who are desirous to see him quickly restored to health and vigour. The stomach is unable to digest the quantity of food taken, and its over-stimulated powers become exhausted; some other disease, or a relapse of his former one, comes on; and he finds it unsafe to tax nature beyond her strength. A sudden transition from full and luxurious living to great abstinence is not a safe measure. Some have resolutely made the change suddenly and with impunity; but it succeeds better when established habits are not too hastily broken in upon.

Of the Seasonings used with DIET. It is ascertained, even by the instincts of the lower animals, that various substances, which themselves afford no nourishment, are necessary to be taken along with the food. They correct the putrid tendency of the aliments, and they materially assist the stomach in the function of digestion. Many of them afford an agreeable flavour to what would otherwise be insipid: but often also, they lead to the consumption of an immoderate quantity, by "tickling the palate when the stomach is sufficed." The condiments in most frequent use are those which are used to prevent the putrefaction of meat, or which are added to food while cooking, or which are eaten at table. The putrefaction of meat is retarded by vinegar, by salt, by nitre, by sugar, and by being smoked; and meat preserved by any of these means is not rendered difficult of digestion, unless the process is carried so far as to dry and harden it; and salt assists in digestion whether the meat be preserved by it, or it be added to the food when it is eaten. The condiments added in cookery, or eaten at the table, are chiefly salt, vinegar, pickles, spices, ketchup, mushrooms, oil and sugar, with some sharp-tasted roots, and other parts of plants. *Salt* is the universal and necessary seasoner, indispensable alike to man and animals. Its excess or long continued use, (at least with provisions in long sea-voyages,) brings on sea-scurvy. *Vinegar* is a good condiment, and rarely hurts the stomach if it be taken in moderate quantity and in a good state. It is a natural, but a groundless fear, that it will increase the tendency to acidity; for though itself sour, it prevents the acetous fermentation of the alimentary mass, and with animal food it does no harm. With vegetables it does not seem to do so well. Vinegar renders shellfish less easily digestible. *Pickles* are vegetable substances preserved by salt and vinegar. Such a combination renders the vinegar more indigestible, and the vegetables are not improved by it. Different vegetables used as *salads*, are to be classed with condiments. The quality of lettuces is slightly soporific; endive and celery are sharp, but are corrected by blanching. Salads are very wholesome to the young and robust, but must be avoided by dyspeptic patients. The sliced cucumber requires the aid of pepper and spices, even in very powerful stomachs. *Spices* have the effect of rendering the food pleasant to the palate, and by their action on the stomach enable it to digest more easily. A moderate use of spices is not to be forbidden; but when they tempt to long continued gluttony and drunkenness, fever, gout, or apoplexy may be the consequence. The spices in most common use are common pepper, Cayenne pepper, ginger, mace, and pimento. Common pepper seems to be a very safe spice, and ginger is an excellent addition to melons and such fruits, or to cold and flatulent drinks. The nutmeg is very popular, especially among the female sex, but should be used cautiously in the puerperal state. There are various vegetables of our own country, which are used with food as condiments; such are horse-radish, cresses, the capsules and seeds of the nasturtium, and the flour of mustard seed. They are in general very wholesome. *Wines* and *Spirits* are also taken as condiments. We have in more places than one stated their advantages and inconveniencies.

On the subject of diet, and especially on provocatives, the moralist has something to say as well as the physician. Industry and temperance have their reward in active vigour, refreshing sleep, and easy digestion; when the stomach is neither overloaded by excess, nor bribed by spices. On the other hand, when the pleasure of eating is made a primary object, and indolence and sensuality neglect the due exercise of the body, the stomach is tardy and irregular in performing its functions, and needs to be solicited by all the arts of the cook, and by condiments, for which all the kingdoms of nature have been ransacked. The powers of digestion are impaired, the body becomes bloated and un-

healthy; and diseases of various kinds exact a rigorous compensation for the waste of those resources of the constitution, which have been so improvidently and prematurely expended.

DIGESTER, PAPIN'S. An iron vessel for boiling bones and other substances, in order to extract completely some of their ingredients. It is furnished with a strong covering fixed down with a powerful screw, which prevents the steam from escaping, and enables us to apply heat at a much greater degree than 212°, the temperature beyond which boiling water cannot rise in common vessels.

DIGESTION. This term is used in an extended sense to signify the whole of that process by which the food, taken into the stomach, whether liquid or solid, is fitted for nutrition; and by which those parts of the food that are unnecessary are thrown out of the body. The organs destined for those purposes are numerous and important. They consist of a long canal, called the *alimentary canal*, extending from the mouth to the anus; of various glands or organs, which secrete or form from the blood, certain fluids which are to act upon or to be mixed with the alimentary matters; of vessels of various dimensions, to convey to the current of the circulation the nourishing fluid formed by the preceding operations which the food has undergone; of the lungs, one of whose functions is to mix thoroughly with the blood the nutritious fluid, and to complete its assimilation; and of the kidneys and skin, by which a portion of the excrementitious matter is carried off. Digestion is sometimes employed in a more limited sense, to mean that part of the process which goes on in the stomach, or at most in the alimentary canal; and both in medical and popular language it seems to be used in this restricted sense. Thus, when a person is troubled with sourness of stomach, heartburn, and flatulence, we say his digestion is bad.

The various organs concerned in digestion are not only intimately connected together, but exert a very general influence over the whole system. The stomach, in particular, has a most universal sympathy, as there is hardly an organ of the body which is not affected, directly or indirectly, by its operations; either food or medicine put into it has an influence on the remotest parts of the body; and many diseases are brought on, and cures effected, through the means of its sympathies. On the other hand, the stomach is affected by the injuries and diseases of other parts, as is frequently seen in the diseases brought on by injuries of the head; in sprains and other injuries of tendinous parts; and in the long train of dyspeptic symptoms brought on by uterine complaints.

We shall proceed to give a slight description of the parts above enumerated, and then mention the processes which take place in digestion.

I. The alimentary canal. As we have stated above, this term means the whole extent from the mouth to the anus, but is more commonly used to express the stomach and intestinal tube. The length of the intestines is about six times the length of the subject to which they belong. They are a long canal twisted upon itself, of various dimensions in different parts, and having a peculiar motion arising from the successive contraction of longitudinal and circular muscular fibres, by which the contents are kept moving onwards in one direction, in the healthy state. This motion is called the peristaltic motion. The *stomach* is a membranous bag resembling the pouch of a bagpipe, having two openings, one at the termination of the gullet, just below the diaphragm or midriff, which separates the chest from the belly, and another at the commencement of the intestines. By the first, matters are introduced into the stomach, and by the second they are discharged from it. This bag, as is well known, is capable of receiving into it a very large quantity of matter, and it must vary in its position according to the degree of its distension. When the stomach is dilated, its large extremity is pushed a good deal to the left side, the belly projects out, the breathing is a little difficult,

from the stomach pressing upon the diaphragm. The inner surface of the stomach has a whitish red appearance, and has numerous folds, by which its capacity is accommodated to the bulk of its contents, and by which likewise it retains the food till it be properly prepared for its next stage. The stomach is abundantly supplied with bloodvessels and nerves, for the transmission of nourishment and vital energy. At its right extremity is a ring of fibres called the *pylorus*, a term signifying a porter; metaphorically applied to denote the sagacious refusal of that part to transmit alimentary matters from the stomach, before they have been properly elaborated. The portion of intestines next the stomach is called the *duodenum*, and is about twelve inches long. The changes which the aliment here undergoes, are very important. There are two openings into it, by which the bile and pancreatic juice are admitted; its inner membrane has many circular folds which increase its surface, and prevent the too rapid passage of its contents. The *jejunum* is the portion of intestine next in continuation to the duodenum, and is followed by the *ileum*, the last and the longest division of the small intestines. Next come the large intestines, whose diameter greatly exceeds that of the others, but whose length is much less. At the beginning of the large intestines, is a valve so placed as to allow the matters to be propelled from the small intestines, but not to regurgitate; though in very severe attacks of the iliac passion, this valve fails to perform its usual office. The commencing portion of the great intestines is called the *cæcum*, or *caput cæcum of the colon*, which *colon* is situated in the cavity of the haunch-bone on the right side; thence it ascends by the kidney on the same side, passes under the concave side of the liver; it runs across the belly, under the stomach, to the left side, thence passes down, and terminates in the *rectum*, or straight gut. The longitudinal muscular fibres of the colon form three straight bundles, and the circular fibres also form bands, which are pretty numerous. This structure puckers the colon into distinct cavities, called its cells; these occasion the gradual descent of the excrement, and give it figure; but in a torpid state, the cells give occasion to an undue retention and accumulation of feculent matter. When the colon is thus distended, it gives rise to many bad effects, by its pressing on the numerous and important organs with which it is in contact. The rectum is the last portion of the intestinal tube; at its termination it is closely connected with the bladder in men, and with the vagina in women; and there is a remarkable sympathy between all these contiguous parts. The rectum is capable of very great distension, even to the size of a large bladder, and the quantity of stool which accumulates is sometimes enormously great.

II. The second division of the organs necessary for digestion, is that of the various glands, which prepare fluids to be employed in that process. The first fluid necessary in the process of digestion is the *saliva*, or fluid formed in the mouth. This is not only necessary when we are chewing the food, but also to be swallowed at other times, both to lubricate the passage and to be mixed with the food in the stomach. Thus we see that those who spit much, as maniacs, have their digestion impaired. During a meal, the quantity of this fluid is much increased, both from the stimulus imparted by the food, and from the mechanical force exerted in chewing. The saliva is a compound fluid, being composed of mucus and a peculiar matter; and several conspicuous effects are produced on it by disease. Hence the disagreeable taste frequently complained of by patients, and hence the various appearances of the tongue, most of which are to be referred to changes in the chemical character of the saliva. The next fluid which the food meets with, is that formed in the stomach, commonly called the *gastric juice*. This liquor is mixed in the stomach with the saliva and mucus; but its own powers are o. a very surprising nature. It differs in diffe

rent animals, and probably in the same stomach at different times. It acts as a solvent on a great variety of substances, and in the dog it acts upon bones. It has the power of coagulating milk and some other fluids in a remarkable degree. A few grains of the inner coat of the stomach, infused in water, produce a fluid capable of coagulating several pounds of milk. It is thus that milk is curdled by rennet, or the infusion of a portion of the stomach of the calf. The gastric juice has the power of resisting and correcting putrefaction. The small intestines secrete a peculiar liquid, the properties of which are little known. Another very important and conspicuous fluid engaged in digestion is the *bile*, which is secreted by the liver, the largest gland in the body. The liver is situated principally under the ribs, on the right side; it has arterial blood for its nourishment; and the venous blood which has circulated through the greater part of the intestines, goes into the liver for the purpose of the bile being secreted from it. From the liver, there proceeds one duct conveying bile into the intestine, and from this a duct branches off, leading to a receptacle called the gall-bladder; so that when the bile does not get into the intestine, it can regurgitate into the gall-bladder; and when pressure is made on the gall-bladder by the distended stomach, bile can pass along the common duct to the duodenum. The duct perforates that intestine obliquely, and the bile is thus prevented from flowing out of the intestine again. Bile is of a yellowish green, and sometimes of a brown colour; its consistence is viscid, and its taste bitter and pungent. The fluid secreted by the *pancreas* flows into the duodenum by a duct situated close to the gall-duct. Its nature and uses are not distinctly known. In the large intestines, there is very little fluid secreted.

Having thus mentioned the organs and fluids prepared for digestion, we shall now give some account of the process. The food being masticated by the teeth, and well mixed with saliva, passes into the stomach, the glands of which sympathize with those of the mouth, and pour out the fluids in greater quantities, when the stimulus of the food is applied to them. When the food reaches the stomach, it seems to remain there for a short time without undergoing any change; but after a time, which varies according to the food and other circumstances, the superfluous watery portion is thought to be separated by the large extremity of the stomach, while the more solid portions are transmitted to the other part of the stomach, there to be converted into a substance called *chyme*; a kind of homogeneous paste, greyish, of a sweetish taste, slightly acid, and retaining some of the properties of the food. During the conversion of the food into chyme, both orifices of the stomach are closed. The principal means employed for this conversion, are the solvent powers of the gastric juice and the motions of the stomach. The period necessary for the formation of chyme varies according to the nature and volume of the food, the degree of mastication and mixture with the saliva, and the activity of the stomach. The whole of the aliment is not changed at once, but successive portions are passed through the pylorus into the duodenum, where farther changes take place. The sensibility of the pylorus is such that it refuses egress to those portions of the food which are not converted into chyme. After the chyme has passed into the duodenum, it mixes with the peculiar fluid secreted by that portion of the intestine, and passing on a little farther, it is mixed with the bile and pancreatic juice. It now assumes a yellow colour and a bitter taste, its sharp odour is diminished, and it is converted into *chyle*, a substance more nearly approaching the animal nature; while the useless and excrementitious part of the chyme is separated. When perfectly formed chyle is extracted from a living animal, it becomes firm, and almost solid; gradually separates into three distinct parts, the one solid, which remains at the bottom of the vessel; the second liquid, and a third that

forms a very thin layer at the surface. Of the three parts into which the chyle separates, that on the surface is of an opaque white; it imparts to the fluid the appearance of milk, and is of a fatty nature. This fatty part is very abundant when the food has contained grease or oil. The more solid part of the chyle contains a mixture, intermediate between albumen and fibrin. Some species of chyle contain very little of this, and then the liquid part of the chyle resembles the serum of the blood. When the chyle is formed, it is taken up from the intestines by innumerable vessels called *lacteals*, from the milky looking fluid which they convey; by them it is carried through certain glands situated in the mesentery, or that fine membrane to which the long intestines are attached. It is thought probable, that those glands operate some important though unknown change on the chyle. Hence it is carried by the same sort of vessels to the thoracic duct, which also receives the lymphatic fluid, or that taken up from various cavities, as broken down and useless, to be discharged from the system. The chyle being mixed with this absorbed fluid, they are carried together to the lungs, where the supply of new matter is incorporated with the circulating blood, and the useless part is exhaled along with the vitiated air.

The part of the aliment which is fit for repairing the waste of the body being thus applied, the excrementitious part which the lacteals refused to take up, is pushed onward by the peristaltic motion of the intestines, into the cœcum above mentioned; its return being prevented by the valve of the colon. Here is acquired the peculiar smell of excrement; here it accumulates for some time, and often to a considerable bulk, owing to the delay occasioned by the cells and compartments of the large intestines; till having entered the rectum, and by its bulk distending that portion of the gut, or irritating it by its acrimony, there is an uneasy sensation, and a desire of its relief. On many occasions, this uneasy feeling is not so great but it may be resisted; and the intestine ceasing to feel the distension, the desire of evacuation ceases, and may not recur for some time. The consistence of the excrement has considerable effect here; we are less able to retain thin or fluid stools than solid ones. There is great variety in the intervals at which different persons evacuate their bowels. The most usual and healthy period is once in twenty-four hours, but some persons do it only every second day; others once a-week. The regularity of the bowels also depends much on habit, and it is of great benefit to solicit nature at a certain time; when this habit is established, the inclination will generally return at the usual hour.

The process of digestion above described is applicable chiefly to solid food; but a great deal of our aliment is taken in, in the form of liquids, as milk, broths, &c. When a liquid having nutritive matter dissolved in it, is introduced into the stomach, it is either coagulated by the gastric juice, or its watery part is absorbed; and the solid matter is deposited, and changed in both cases into chyme. Milk is coagulated before being changed into chyme, and broths have their watery part absorbed; and the gelatine, fat, and other solid parts they contain, are then changed into chyme. Wine and fermented liquors undergo a similar change; their alcohol coagulates a portion of the juices found in the stomach, and this, with the other portions of the liquid, is digested. Oil, though fluid, is not absorbed, but is entirely transformed into chyme. But it is not every stomach, nor the same stomach at all times, that can digest oil; the quantity also that it can manage is limited, and the overplus getting down into the bowels, proves laxative. Hence the utility of castor oil as a medicine, and hence many stomachs throw it up at first. These are the principal circumstances connected with the important function of digestion. The inconveniences arising from its diseased state, with the methods of relief, will be found fully detailed under the article Stomach Complaints, or Dyspepsa.

DIGESTION, in chemistry and pharmacy, signifies the subjecting of bodies to the action of dissolving fluids, and aiding the extraction of some of their principles by a gentle heat, between 60° and 90° of Fahrenheit's thermometer.

DIGESTIVES. A term applied by the older surgeons to substances which were believed to have the power of promoting suppuration in wounds and ulcers. It is now disused.

DIGITALIS PURPUREA. The botanical name for a plant which furnishes a very remarkable and powerful medicine. *See* FOXGLOVE.

DILL, *Anethum graveolens*, is an umbelliferous plant, the taste of whose seeds is moderately warm and pungent; their smell is aromatic; and they are used as a carminative. The distilled water is a valuable medicine for this purpose, in the flatulent colics of children. A little of the powder of the seeds is also given to them in their food. We may mention here a kindred medicine, the ANISE, from the *Pimpinella Anisum*. The seeds are warm and carminative; rectified spirit extracts the whole of their flavour; water takes but little of it. Anise is used for the same purposes as dill.

DILUENTS. Watery liquors which are believed to increase the fluidity of the blood, and to diminish the acrimony and viscidness of several of the secreted or excreted fluids. Simple water-gruel, weak tea, and a great variety of such liquors, are much used as diluents. Such drinks are especially required in febrile diseases, both as removing the irritation caused by thirst, and as diluting the acrimony of the contents of the stomach and bowels, and as facilitating the perspiration. In various diseases of the stomach and bowels, diluents are very useful, by mixing with the bile and other fluids, and rendering them more mild. They may also assist in digestion, by rendering the chyme and the chyle thinner and more easily absorbed by the lacteals. As watery fluids pass off readily by the kidneys, they are of great utility in diseases of the urinary organs and of the bladder. Though it may seem a good rule, to let the salutary instinct of nature for diluents in feverish disorders be gratified, yet, as a large quantity of fluid will, for a time, distend the bloodvessels, and so increase the action of the heart and arteries, it may be prudent to restrain the appetite of thirst in those inflammations where we combat the disease by large bleedings. It will be better, in such cases, to allay thirst by very small quantities of fluid, or by eating fruits either fresh or preserved. The temperature of diluting fluids is to be regulated by the state of the body at the time of giving them. In the cold or shivering stage of a disease they should be hot; when the heat is great and the skin dry, they should be cold; and in most other cases they should be tepid. *See* DRINKS.

DINNER is the principal meal in modern times, and the one at which luxury is chiefly indulged in. Much disease arises from the mismanagement of dinner, both as to time, and to the quantity and variety of food that is taken. Physicians cannot lay down any general rule for the time at which persons should dine; the hour when nature requires it, and the period which is most adapted for it, as furnishing a supply of aliment before the exhaustion of the powers has proceeded too far, would seem to be two or three o'clock; but individuals vary in their habits, in the kind of breakfast they take, and in their powers of digestion; all which are to be taken into account by the medical man who gives his advice on the subject. Some persons much troubled with indigestion, are relieved by the simple expedient of taking their dinner sooner or later, as they find upon trial what time agrees best; and much may be done to relieve stomach complaints by diminishing the quantity of food and drink taken at dinner. Late copious dinners are really nothing else than heavy suppers, and in all likelihood will produce restlessness, nightmare, and various unpleasant symptoms. The dinners of children should always be in the middle of the day.

DIPLOE. The skull is not composed of bones simple and uniform throughout their thickness, but of two plates, between which is interposed a cellular texture, called the *diploë*.

DIPLOPIA. Double vision; commonly the effect of accident, injuring either the brain, or the eye and its appendages; sometimes the consequence of internal disease about the optic nerves; not unfrequently one of the symptoms of water in the head. It is to be cured, by curing, if we can, the original disease.

DISCUSS. To occasion the disappearance of a tumour, without wound or ulceration. Medicines supposed to have this power are called *discutients;* but this last term is not very commonly applied in modern surgery.

DISLOCATION. When the articular surfaces of bones are forced out of their proper place, the accident is termed a *dislocation* or *luxation.* The loose joints which admit of motion in every direction, as the shoulder-joint, and the hip-joint, are those which are most frequently dislocated; while those which move like a hinge, as the knee-joint and elbow, are more rarely dislocated, and require an unusual degree of violence to accomplish it. Dislocation may be complete, as when the articulating surfaces are quite separated; or incomplete, when a part still remains in contact with its neighbouring bone. The dislocation of the round-headed bones may take place in every direction, that is, they may be pushed backward, forward, upward, downward, or in any part of the circumference. The other kinds of joints are capable of dislocation only backward, forward, and to either side. When a dislocated bone has been restored to its place, it is said to be *reduced;* and the ease with which this is accomplished depends much on the length of time which has elapsed since the accident. When bones have been out of their place for a few days, their reduction becomes very difficult; and when the time is very long, it is impossible. The soft parts and the bone accommodate themselves to the altered position. In several cases, the opening in the capsular ligament becomes closed, and will not allow the bone to return into its place; or adhesions may be formed between the bones and the place to which it has come. For this reason, when a person has had the misfortune to dislocate a joint, he should immediately apply for assistance to have it reduced if possible, before swelling and inflammation of the parts, or any other untoward consequence, render reduction difficult or impossible. In cases of very great external violence, it sometimes happens that not only is the joint luxated, but an external wound is inflicted, by which the danger and severity of the symptoms are exceedingly increased; and in some cases, so great is the danger of a wounded joint, and of the air getting admission into its cavity, that immediate amputation of the limb is advisable.

A bone is known to be dislocated by there being a loss of the usual motion in the joint, by the limb being altered in its length, or distorted; by there being great pain in the surrounding parts, and this pain increased on motion or pressure. The head of the dislocated bone is sometimes distinctly felt in a wrong place, and a vacuity or depression is perceived where there ought to be a fulness.

The causes of dislocation are either internal or external. The internal causes are, diseases of the joint or its appendages, relaxation of the ligaments, palsy of the muscles, any morbid affection that destroys the cartilages, the ligaments, or articular cavities. A white swelling sometimes partially dislocates the knee; and scrofulous disease of the hip-joint is the cause of dislocation there. External causes of dislocation are such as blows, falls, violent wrenches or twists, and the like. Dislocations from the last set of causes are more easily reduced than others.

Treatment. The treatment of dislocations, though a branch of surgery requiring great skill and dexterity as well as anatomical science, has very frequent-

ly been in the hands of those who had no pretensions to either, and who were possessed only of brute strength, or of a certain knack empirically acquired, of which they knew not the mechanism nor the reason. "Many people (says Mr. Pott) regard bone-setting, as it is called, as no matter of science; as a thing which the most ignorant farrier may, with the utmost ease, become soon and perfectly master of; nay, that he may receive it from his father and family as a kind of heritage." In the former practice of surgery, too much was expected from mere force, either of the human arm alone, or assisted by machinery; and too little was allowed to the powers of nature, which might be brought into action by a proper knowledge of the muscles which favour or oppose the reduction. The muscles which move the joints in a sound state, do not lose their power when the joint is luxated; but, on the contrary, are often spasmodically affected, and draw the bone out of the direction most favourable for its reduction. It becomes, therefore, a matter of accurate consideration, what muscles are likely to oppose the reduction of a joint; and these muscles will vary according to the direction in which the bone is luxated. In the writings of Mr. Pott are some of the best and most judicious observations on dislocations; and much of what follows is extracted from that eminent surgical author. Although a joint may have been luxated by means of considerable violence, it can by no means follow that the same degree of violence is necessary for its reduction. When a joint has been luxated, at least one of the bones is kept in that unnatural situation by the action of some of the muscular parts in connexion with it. We cannot know whether the ligaments of the joints are broken or not, and this circumstance need not influence our methods for reduction. All the force used in reducing a luxated bone, be it more or less, be it by hands, towels, ligatures, or machines, ought always to be applied to the other extremity of the said bone, and as much as possible to that only. In the reduction of the shoulder and hip-joint, the whole body should be kept as steady as possible. In order to make use of an extending force with all possible advantage, and to excite thereby the least pain and inconvenience, it is necessary that all parts serving to the motion of the dislocated joint, or in any degree connected with it, be put into such a state as to give the smallest possible degree of resistance. In the reduction of such joints as consist of a round head, moving in a socket, no attempt ought to be made for replacing the head, until it has by extension been brought forth from the place where it is, and nearly to a level with the socket. All that the surgeon has to do, is to bring it to such level; the muscles attached to the bone will do the rest for him, and that whether he will or not. Whatever kind or degree of force may be found necessary for the reduction of a luxated joint, that force must be employed gradually; the lesser degree must always be first tried, and it must be increased by degrees. They who have not made the experiment, will not believe to how great a degree a gradually increased extension may be carried without any injury to the parts extended, whereas great force exerted hastily, is productive of very terrible and lasting mischief. Extension may either be made by means of assistants, who are to take hold of napkins or sheets, put round the part at which it is judged proper to make the extension, or else a multiplied pulley may be used. The first is the preferable method. The extension should always be first made in the same direction into which the dislocated bone is thrown; but in proportion as the muscles yield, the bone is to be gradually brought back into its natural position. The extension will prove quite unavailing, unless the bone, with which the dislocated head is naturally articulated, be kept motionless by counter-extension, or a force at least equal to the other, but made in a contrary direction. When the attempts at reduction fail, the want of

success is sometimes owing to the extension not being powerful enough, and to the great muscular strength of the patient, whose muscles counteract all the efforts to replace the bone. In the latter case, the warm bath, bleeding, and other means of relaxation are to be employed; and some have even recommended intoxication; but though a drunken man is sometimes quite incapable of resisting any force applied to him, the propriety of this is very questionable, as the same effect may be produced by more scientific and less immoral means. Long continued, unremitting, gradual extension, will at last weary out the most powerful muscles; and this practice is the most to be recommended. A dislocation is known to be reduced by the limb recovering its natural length, shape, and direction, and by the patient being able to perform certain motions, which he could not do when the bone was out of its place. There is a great and sudden diminution of pain; and sometimes the bone is heard to give a loud crack when going into its natural position.

After the reduction of a dislocated bone is effected, care must be taken to prevent a recurrence of the accident, by retaining the limb steady by appropriate bandages, which should be put as far as possible from the centre of motion. To the ankle and the wrist, splints may sometimes be necessary. After luxations of the shoulder-joint, the arm is to be kept in a sling. If there is any appearance of inflammation or swelling taking place from the accident, or from the force employed in reduction, a cold lotion is to be kept to the place, and even leeches may be necessary, with a saline purgative. The patient must for some time be cautious in using the limb.

Compound luxations are those which are attended with a wound communicating with the cavities of the injured joints. These injuries are often attended with very great danger, and much skill and judgment are required to decide upon the treatment immediately after the accident. So much injury may be done, that any attempt to cure it would soon be frustrated by violent fever, gangrene, and death; all of which may be prevented by the amputation of the limb. At the same time, it is to be remarked, that by proper care and judicious treatment, many apparently untoward cases may do well. The reduction of compound dislocations must be effected as gently and as quickly as possible. The wound is to be cleared from dirt or any extraneous matter, and its lips are to be brought together by adhesive plaster. The limb is to be bound with the proper splints and bandages, and to be kept cool by refrigerant lotions; and if there is much constitutional excitement, bleeding, large and general, is to be put in practice; and internal means are to be used for the diminution and cure of feverish symptoms, should any such present themselves. Saline draughts and antimonial medicines must be resorted to, and purgatives also, provided they do not subject the patient to too much motion of the injured part. If the febrile symptoms abate, and the local inflammation does not run to any great extent, we may hope that the injury is to pass over without bad consequences; but the reverse may happen, violent inflammation may attack the joint, and be followed by suppuration, and all the dangers and debilitating symptoms of hectic fever. While these continue it would be dangerous to attempt amputation; but we must wait till these symptoms abate, and then give the patient the only chance of saving his life. Having made these general observations on dislocations, and shown the principles on which they should be treated, it can hardly be considered necessary or proper, in a popular work, to enter on the minute details of the symptoms and cure of every particular dislocation. For these we must refer to books of Surgery.

Dislocations or fractures of the limbs of infants sometimes happen in delivery. They ought never to be concealed or neglected, but the proper measures should be taken for their replacement and cure.

DISPENSARY. A place where the poor are supplied gratis with medicines and advice.

DISPENSATORY. A book which treats of medicines, and the methods of compounding them.

DISSECTION. The cutting of dead animals, or of plants, with the intention of exhibiting their structure.

DISTENSION. A stretching of any part, as of the stomach or bowels from wind, or of the muscles from any violent extension.

DISTILLATION. The operation by which volatile substances are raised in the state of vapour, and condensed by cold. Many important articles are procured by distillation. It is thus that alcohol in all its forms is obtained; and many substances when distilled with water, impart their properties, their taste, and their smell, to the vapour which rises and is condensed. Thus rose-water, peppermint-water, &c. are obtained.

DIURETICS. Medicines which increase the secretion by the kidneys, and by consequence the flow of urine. This is an effect which in many cases of disease we are very anxious to accomplish, and which has a very salutary tendency. In dropsy it is always very desirable to increase the flow of urine, and in several species of that complaint, it is the chief indication of cure. The principal diuretic medicines are the following; cream of tartar, squill, foxglove, acetate of potash, nitrate of potash, carbonate of soda, spirit of nitrous ether, turpentine, juniper, tobacco, and mercury.

These various diuretics have their peculiar modes of operating. Some, as potash and its combinations, nitre and cream of tartar, squill, juniper, and turpentine, seem to act by directly stimulating the kidneys, being carried, more or less decomposed, to these organs. Others, as mercury, stimulate the absorbents primarily, and secondarily the kidneys; others appear to act first on the stomach and digestive organs, or the bowels, and afterwards on the absorbents; such are digitalis, tobacco, jalap, elaterium; while tonics, by strengthening the whole body, strengthen also the absorbents.

The diuretic powers of cream of tartar are much promoted by drinking plentifully; and a good way of giving that medicine, is to give a dessert-spoonful of cream of tartar in a tumbler of tepid water every morning. Squill may be given in the form of the common squill pill, or one or two drachms of the vinegar of squill, in a convenient vehicle, twice a-day. Under Foxglove, we have given minute directions for the administration of that powerful medicine. The acetate of potash is used in the dose of from one to two drachms; it should be given pretty largely diluted in tepid water. The nitrate of potash is a good diuretic, and must be given in large quantities of mild diluents, as barley-water or linseed-tea, two drachms to an English quart. The juniper is given in the form of its essential oil, made into an emulsion with the spirit of nitrous ether. The diuretic effects of gin are owing to its impregnation with the essential oil of juniper; hence gin-toddy in moderate quantity may be allowed in cases where a diuretic drink is wanted. The spirit of nitrous ether is an excellent diuretic, in doses of a table-spoonful in a cupful of warm water every two hours. Much may be done by a skilful combination of diuretics, as uniting squill and foxglove, or foxglove and the spirit of nitrous ether; or gin with cream of tartar to form punch. Their effect is to be aided by moderate cold to the surface of the body, and we therefore prefer giving them during the daytime. It is to be remarked, however, that we are by no means certain of always procuring a diuretic effect by any medicine whatever, and that even those which in general have the highest character, frequently fail.

DOGMATISTS. A sect of physicians among the ancients, who professed to be regulated in their practice by proper reasoning from facts previously discovered respecting the causes of disease, the action of remedies, and the structure and func-

tions of the living body. The professors of this *medicina rationalis*, as Celsus calls it, considered it necessary to know the elements of which our bodies are composed, and what it is that constitutes health and sickness. The dogmatists seem to have had as many theories and doubtful speculations as their more modern successors. Some of them thought that disease depended on an excess or deficiency of some of the four elements, hot, cold, moist, and dry; others, as Herophilus, that every disease was in the fluids; Hippocrates thought the breathing was generally in fault; Erasistratus ascribed inflammation and its concomitant fever to the blood finding its way into vessels destined for the transmission of air; Asclepiades attributed disease to the blocking up of the way by which the atoms flow through the invisible pores. They thought that he who had traced the original cause of sickness, would be the fittest to treat it. They did not deny that experiments were necessary, but they thought that no one could institute the proper experiments without previous reasoning. They inquired into the nature of respiration, of digestion, and assimilation, the pulsation of the arteries, the cause of sleep and watchfulness; and, as much of the ancient practice was founded on their theories of dietetics, the function of digestion attracted their peculiar regard, and the various opinions on that subject gave rise to abundance of controversy and subtilty of discussion. They considered the knowledge of the structure, position, and colour of the internal organs as quite necessary to a knowledge of the causes and the cure of inward pains and diseases; they were therefore fully aware of the importance of anatomy, and even thought it allowable to apply the knife of the anatomist to criminals when alive, that by the punishment of the guilty, and those few in number, remedies might be discovered for the benefit of the innocent of every nation in all succeeding ages. It is to be hoped that the milk of human kindness would render this cruel mode of acquiring knowledge, an expedient rarely if ever, practised. The dogmatist whose writings have outlived those of all his sect, and whose name will ever be held in deserved veneration, is Hippocrates, the Father of Physic. The dogmatists were analogous to the regular physicians of modern times; and like them, they had formidable antagonists and rivals in the Empirics; who despised their principles, theories, and discussions, and maintained that the practice of physic should be guided by experience alone. *See* EMPIRICS.

DOG-ROSE, *Rosa canina*. A conserve is made of the fruit of this bush, namely of dog-hips, but it is not of any consequence.

DOVER'S POWDER. The powder of opium and ipecacuan. The acknowledged excellence of this combination, and its having been admitted into all the pharmacopœias, induces us to mention it under the name of its inventor, though he published it at first with an air of mystery, and though he hitches in a rhyme of Pope :—

"See, desperate Misery lays hold on Dover."

The ingredients of this medicine are, in ten grains of the powder, one grain of opium, one grain of ipecacuan, and eight of the sulphate of potash; the use of this last substance being chiefly mechanical, to effect the more complete trituration and mixture of the others. It is a most valuable sudorific, and affords a good example of one medicine so altering the properties of another, as to produce a third substance possessed of new powers. It is much used in rheumatism, in dropsy, in catarrh, and in many other diseases where perspiration is required. The soothing effects of opium seem to be greatly increased by its combination with the ipecacuan. In inflammation of the bowels, after the free use of blood-letting; and in puerperal fever, when there is much restlessness and irritability, Dover's powder is an excellent medicine. When we wish to promote perspiration by means of it, it is proper to abstain from drinking much till after the sweat begins to flow. *See* RHEUMATISM.

DRAUGHTS. When a medicine is administered in a small portion of liquid, either singly or with other substances, such combination is called a *draught.* There are various kinds of draughts according to the purpose we have in view: there are sleeping or anodyne draughts, sweating draughts, purgative draughts. This is a good form of giving a medicine when we intend to be very exact in the dose; thus, the tincture of opium, of foxglove, and some other active medicines are given in draughts. They are also a good form when the mixture is liable to spoil by keeping or by exposure to the air. The quantity of a draught should not exceed an ounce and a half, or about three ordinary table-spoonfuls.

DREAMING is that well known condition of the mind in sleep, during which the ideas of the imagination are mistaken for realities, the mistake not being corrected by the exercise of the senses; and in which the body is exempted from the influence of volition.

In a work like this, it would be out of place to discuss the metaphysics of dreaming; and we only propose to mention a few particulars relative to the connexion of that wonderful subject with the state of the bodily organs. When the stomach is overloaded with a heavy supper, persons are apt to be troubled with the nightmare, and frightful dreams; in the disease called water in the chest, the patient often fancies himself in danger, and awakens with a start, in consequence of his efforts to escape it; and the bodily sensations of pain, of heat, and cold, when they are not strong enough to break the sleep, frequently excite a train of images, or a series of adventures, of which these sensations seem to form a conspicuous part. On this very curious and interesting subject, we quote the following illustrations from Dr. Abercrombie. "In a paper by the late eminent Dr. Gregory, he mentions of himself, that having on one occasion, gone to bed with a vessel of hot water at his feet, he dreamt of walking up the crater of Mount Etna, and of feeling the ground warm under him. He had, at an early period of his life, visited Mount Vesuvius, and actually felt a strong sensation of warmth in his feet, when walking up the side of the crater; but it was remarkable, that the dream was not of Vesuvius, but of Etna, of which he had only read Brydon's description. This was probably from the latter impression having been the more recent. On another occasion, he dreamt of spending a winter at Hudson's Bay, and of suffering much distress from the intense frost. He found that he had thrown off the bedclothes in his sleep: and a few days before, he had been reading a very particular account of the state of the colonies in that country during winter. Again, when suffering from toothach, he dreamt of undergoing the operation of toothdrawing, with the additional circumstance, that the operator drew a sound tooth, leaving the aching one in its place. Dr. Reid relates of himself, that the dressing applied after a blister on his head, having become ruffled so as to produce considerable uneasiness, he dreamt of falling into the hands of savages and being scalped by them."

Dreams are very frequently produced by a noise, which gives occasion to a train of ideas, but is not sufficient to awake the person. "The most striking anecdote in Dr. Gregory's interesting paper is one in which similar dreams were produced in a gentleman and his wife, at the same time, and by the same cause. It happened at the period when there was an alarm of French invasion, and almost every man in Edinburgh was a soldier. All things had been arranged in expectation of the landing of an enemy; the first notice of which was to be given by a gun from the Castle, and this was to be followed by a chain of signals calculated to alarm the country in all directions. Farther, there had been recently in Edinburgh a splendid military spectacle, in which five thousand men had been drawn up in Prince's Street, fronting the Castle. The gentleman to whom the dream occurred, and who had been a most zealous volunteer

was in bed between two and three o'clock in the morning, when he dreamt of hearing the signal gun. He was immediately at the Castle, witnessed the proceedings for displaying the signals, and saw and heard a great bustle over the town, from troops and artillery assembling, especially in Prince's Street. At this time he was roused by his wife, who awoke in a fright, in consequence of a similar dream, connected with much noise and the landing of an enemy, and concluding with the death of a particular friend of her husband's, who had served with him as a volunteer during the late war. The origin of this remarkable concurrence was ascertained, in the morning, to be the noise produced in the room above, by the fall of a pair of tongs, which had been left in some very awkward position, in support of a clothes-screen.

"To this part of the subject, are to be referred some remarkable cases, in which, in particular individuals, dreams can be produced by whispering into their ears when they are asleep. One of the most curious, as well as authentic examples of this kind, has been referred to by several writers; I find the particulars in the paper of Dr. Gregory, and they were related to him by a gentleman who witnessed them. The subject of it was an officer in the expedition to Louisburg in 1758, who had this peculiarity in so remarkable a degree, that his companions in the transport were in the constant habit of amusing themselves at his expense. They could produce in him any kind of dream, by whispering into his ear, especially if this was done by a friend with whose voice he was familiar. At one time, they conducted him through the whole progress of a quarrel, which ended in a duel; and, when the parties were supposed to be met, a pistol was put into his hand, which he fired, and was awakened by the report. On another occasion, they found him asleep on the top of a locker or bunker in the cabin, when they made him believe he had fallen overboard, and exhorted him to save himself by swimming. He immediately imitated all the motions of swimming. They then told him that a shark was pursuing him, and entreated him to dive for his life. He instantly did so, with such force as to throw himself entirely from the locker upon the cabin floor, by which he was much bruised, and awakened of course. After the landing of the army at Louisburg, his friends found him one day asleep in his tent, and evidently much annoyed by the cannonading. They then made him believe that he was engaged, when he expressed great fear, and showed an evident disposition to run away. Against this they remonstrated, but, at the same time, increased his fears, by imitating the groans of the wounded and the dying; and when he asked, as he often did, who was down, they named his particular friends. At last they told him that the man next himself in the line had fallen, when he instantly sprung from his bed, rushed out of the tent, and was roused from his danger and his dream together by falling over the tent ropes. A remarkable circumstance in this case was, that, after these experiments, he had no distinct recollection of his dreams, but only a confused feeling of oppression or fatigue; and used to tell his friends that he was sure they had been playing some trick upon him. A case entirely similar is related in Smellie's Natural History, the subject of which was a medical student at the University of Edinburgh.

"A singular fact has often been observed in dreams which are excited by a noise; namely, that the same sound awakes the person, and produces a dream which appears to him to occupy a considerable time. The following example of this has been related to me. A gentleman dreamt that he had enlisted as a soldier, joined his regiment, deserted, was apprehehended, carried back, tried, condemned to be shot, and, at last, led out for execution. After all the usual preparations, a gun was fired; he awoke with the report, and found that a noise in an adjoining room had both produced

the dream and awaked him. The same want of the notion of time is observed in dreams from other causes. Dr. Gregory mentions a gentleman, who, after sleeping in a damp place, was for a long time liable to a feeling of suffocation whenever he slept in a lying posture; and this was always accompanied by a dream of a skeleton which grasped him violently by the throat. He could sleep in a sitting posture without any uneasy feeling; and, after trying various expedients, he at last had a sentinel placed beside him, with orders to awake him whenever he sunk down. On one occasion, he was attacked by the skeleton, and a severe and long struggle ensued before he awoke. On finding fault with his attendant for allowing him to lie so long in such a state of suffering, he was assured that he had not lain an instant, but had been awakened the moment he began to sink. The gentleman after a considerable time recovered from the affection." (Dr. ABERCROMBIE *on the Intellectual Powers.*)

Though dreams are not always under our controul, we may avoid some of their exciting causes, by retiring to rest with the stomach not oppressed by too much food, and the mind if possible, free from care; and children should not be distressed with frightful or disgusting stories; nor allowed to associate terror with darkness, that their days may be cheerful, and their slumbers unbroken by frightful dreams.

" In diseases, when the dreams are hurried and violent, we have reason to expect delirium; when the mind in fevers is gloomy and distressed, and the dreams frightful, the fever soon becomes dangerous; but when in sleep, the fancy is soothed by pleasing images, the disease is seldom alarming." (Dr. PARR.)

DRINKS. We are warned by the appetite of thirst to take in a certain quantity of fluid to dilute our solid food, and to supply the waste of those fluids which are continually expended during the continuance of life. So urgent is this necessity, that we are able to bear hunger more quietly than thirst, and to live longer when deprived of food, than when deprived of drink. Of drinks there is a great variety. Water is certainly the proper and natural drink of man and other animals; but there are many others furnished both by nature and by art, as beer, porter, cider, whey, milk, toast-water, &c. which may very properly be used, provided they be not taken to excess, and provided each individual takes what he finds best to agree with him. The quantity of drink required will vary according to the climate, the nature of the food, and the peculiarity of each individual. The effects of fluids on the body vary also according to their temperature, their volume, and the time when they are drank. Persons in good health generally take a great portion of their drink, especially at dinner, of the temperature of the air; but in weaker stomachs, it may be required to be a little warmed, though it is seldom safe for dyspeptics to have them very hot; and far less should they chill the energies of the stomach by cold or iced drinks. The quantity of drink taken is also of much consequence to good digestion; a large volume of fluid will prevent the food from being properly acted upon by the stomach; and if there be too little, the mass will be dry and hard. Different kinds of food require different quantities of liquid; animal food requires more than vegetable, roasted more than boiled; and baked meat more still than roasted. The time of drinking may be generally left to the individual. To load the stomach with drink before a meal is unwise; but to drink more or less during a meal, according to the nature of the food, assists digestion. To eat too fast causes thirst, in order to supply the saliva which would have been poured out, had mastication been properly performed. During the intervals of our solid meals, there is an instinctive desire for drink, and hence the good effects of tea, coffee, and such beverages, when taken in moderation some hours after a solid meal.

DROPSY. A disease, of which a very conspicuous symptom is the effusion and stagnation of a watery fluid in certain cavities and cells, where it is not perceptible in the healthy state. Thus water may be accumulated in the ventricles of the brain, in the chest, in the belly, and the cellular texture generally, giving rise to a train of symptoms, different in each particular case, and requiring particular modes of cure. Water effused in the ventricles of the brain is commonly the consequence of previous inflammation; and gives rise to a variety of distressing symptoms, which generally prove fatal; this disease is usually called water in the head, and is treated of under that title. *See* HEAD, *Water in.*

Dropsy in the chest, or water effused between the investing membrane of the lungs and the lining membrane of the ribs, is not so conspicuous by its external appearance as it is distinguished by the dangerous symptoms to which it gives rise. *See* CHEST, *Water in.*

The disease to which the term *Dropsy* is most usually applied, is that general swelling over the whole body, of a soft and doughy feel, accompanied with great weakness, and other symptoms to be hereafter described; or it is that swelling of the belly from the accumulation of fluid, which often distends it to a prodigious size. It is the two last mentioned kinds of the disease that we mean to treat of under the title of DROPSY.

GENERAL DROPSY, or ANASARCA, is a swelling chiefly under the skin, at first appearing on particular parts only, but at length gradually extending to the whole surface. The reason of this progressive swelling is the free communication between all the parts of the cellular substance; another illustration of which is to be found, in the free passage of air into all the surface of the body, when it has escaped from the lungs in consequence of a wound. The swelling in dropsy is always soft and uniform over any member; and when pressure is made with the finger, a pit or hollow is formed by the water being pressed out of some of its cells, into the neighbouring ones. Soon after the pressure is removed, the swelling returns to its former fulness. This is technically called pitting on pressure. Generally, the swelling appears first on the lower extremities, and that only in the evening; it is not very perceptible in the morning. The more that a person has been in the erect posture through the day, the greater is the swelling towards evening. It is easy to be seen, that this is owing to the water making its way downwards by its own weight; while the recumbent posture during sleep allows it either to diffuse itself equally over the whole body, or if the quantity be great, and the disease far advanced, to accumulate in the upper parts of the body, and to occasion the swelled face, and closed up eyes, which some dropsical patients exhibit in the morning. Sometimes the fluid which is accumulated in the cellular texture immediately under the skin, oozes out through the pores of the cuticle; sometimes being too thick to do so, it raises the outer skin in blisters. Sometimes again, the skin not allowing the water to pass through it, is hardened by distension, and gives the swelling an unusual degree of firmness. If, from any cause, an inflammation should come upon a dropsical limb, it is of a bad kind, spreading along a great extent of surface, like the rose, and too frequently ending in gangrene. General dropsy is almost always attended with scantiness of urine, which is generally high-coloured, and after cooling, lets fall a copious reddish sediment. There is also an unusual degree of thirst; and both these last symptoms are to be ascribed to the watery parts of the blood passing into the cellular texture, whereby they are prevented from diluting the acrimony of the urine, and from moistening the mouth, the fauces, and the other parts which in the healthy state are dependent on the action of the salivary or other similar glands. The appetite is generally bad; and there is a feeling of debility, with sluggishness,

drowsiness, and disinclination to motion. Dropsy is very often a very tedious disease; and the patient dies, after long suffering, sometimes from the respiratory organs becoming oppressed with the load of watery fluid; at other times, life sinks exhausted from a universal failing of the digestive and nervous powers.

Causes of DROPSY. As dropsy consists in the preternatural accumulation of a watery fluid in various parts of the body, the first step in our inquiry is to ascertain whence this unusual quantity of fluid proceeds. In health, a watery fluid is poured out from what are termed exhalant arteries, into every cavity of the body, and into every cell of the cellular substance, to moisten the parts, to render motion easy, and to diminish friction. The absorbent vessels carry off the effused fluid; and by the proper energy of these two sets of vessels, a well balanced action is kept up, and all accumulation is prevented. Now, if the watery fluid is poured out in greater quantity than natural, the absorbents will not be able to take it up: and if the power of the absorbents is by any cause weakened, they will not take up the quantity effused, though it should not be larger than natural. Increased effusion may be owing, either to a preternatural increase of the ordinary exhalation, or from vessels which carry watery fluids being ruptured. Exhalation may be increased by whatever prevents the free return of the blood from the arteries into the veins. The blood not getting easily into the veins from the extremities of the arteries which open into the veins, and the action of the heart and arteries still continuing behind, the blood is pressed with force into the exhalant arteries, and more watery fluid is poured out by them. This obstruction to the free entrance of the blood from the terminating arteries into the commencing veins, may exist very far from these extremities, even in the heart itself; and hence diseases of the heart and great vessels are often known to occasion dropsy. Formerly, dropsy was believed to be universally a disease of debility, or diminished action; but inflammatory action in some part of the chest is now acknowledged to be a cause of dropsy, from its impeding the free action of the heart and great vessels. Hence, also, a tumour pressing on the vessels of a limb, causes a watery swelling of that limb; and a tight ligature or garter, or even the difficult passage of the blood from its own weight, causes a limb to swell towards evening. Hence, also, diseases of the liver, by obstructing the free circulation of the immense quantity of blood, which should pass through it, occasion an exhalation into the cavity of the abdomen, and produce dropsy of the belly. On the same principle, also, we explain the dropsical swelling which takes place in the legs and thighs of pregnant women, from the bulk of the uterus pressing on the great vessels which return the blood from the lower extremities. Another cause of increased exhalation is believed to be a laxity or weakness of the exhalant vessels; a symptom and a part of that general weakness which sometimes pervades the whole system. Hence fevers of various kinds, copious and long continued discharges of blood, or any other weakening causes, produce a debility of the system, which leads to dropsy; and hence, also, that frequently occurring circumstance, intemperance in the use of strong liquors, especially dram-drinking, produces the most intractable and fatal cases of dropsy. Dram-drinking has a doubly injurious effect; it relaxes and totally debilitates the whole system, thus producing general dropsy; and it occasions hardness of the liver, and that obstruction in it which lays the foundation for dropsy of the belly. If there be a greater proportion than there ought to be of the watery parts of the blood, this may give rise to an increased exhalation; and sometimes, though rarely, dropsy is produced in this way, by drinking much watery fluids, which fluids pass off by the exhalants. Large bleed-

ing has been already mentioned as causing general debility, and as producing dropsy; but it may also do so by causing a diminution of the proper proportion of the red globules and fibrine of the blood, which are not so easily repaired as the watery portion. There may not only be increased exhalation, but diminished absorption, depending on the same general causes of debility.

Treatment of DROPSY. From the account given of the causes of dropsy, it is evident that while they continue to act, it will be useless to attempt carrying off the effused fluid, and therefore one of our first objects must be to put a stop to those causes. In that species of dropsy which is accompanied by a strong and full pulse, we are to lessen the inflammatory action and give freedom to the heart and bloodvessels, by copious bleeding; and we must divest ourselves of the prejudice so long maintained, that dropsy in every case is a disease of debility. When the inflammatory action is over, the swelling soon disappears. In a dram-drinker, or an indolent debilitated person, it will be in vain to give drugs, or to direct any particular regimen however salutary, till these bad habits are given up. We are next to attempt to get rid of the water already accumulated. If the patient has strength enough to go through a course of mercury, that powerful medicine is in many cases found to have a most excellent effect in stimulating the whole system, and exciting powerfully the action of the absorbents. When the water has been carried off by the effects of mercury, we are to stop the medicine, and to attend to keeping up the strength by bark and wine, and proper nourishment; and to regulate the bowels and any other functions that require it. Sometimes very strong purgatives procure a very copious discharge of watery fluid; of this kind are the resinous purges, as gamboge, scammony, and the like; or jalap in combination with aloes, scammony, gamboge, or cream of tartar. A powder for this purpose may consist of eight grains of aloes, ten of jalap, and six of gamboge or scammony, to be taken in a bolus, or suspended in syrup or mucilage. A purgative of great but dangerous efficacy in dropsy, is the elaterium or wild cucumber; a medicine of great activity, but rather uncertain, and requiring the greatest caution in its administration; the dose at first is not more than the eighth part of a grain of the extract. Another class of remedies much used in dropsy, are diuretic medicines; and could we insure the success of their operating, we should be better pleased to carry off the dropsical waters in this way, than by any other method whatever. Under the article DIURETICS, we have enumerated pretty fully the remedies of this class, with their mode of administration; and therefore need not resume the discussion here; we shall merely mention, that cream of tartar is thought a good diuretic in general dropsy; squill, alone or combined, in dropsy of the belly; and foxglove, in water of the chest. Another method of evacuating dropsical water, is by making a number of small punctures in the skin, reaching to the cellular substance; and a great quantity of water often runs off in this way; but from the unhealthy state of the constitution, such punctures are very liable to run into mortification; and even the spontaneous bursting of the skin is followed by the same bad effect, so that practitioners are by no means fond of attempting to let off the water by puncture. The dread of the same consequences from wounds in dropsical patients, renders us unwilling to advise setons, issues, or blisters, which have been recommended for the discharge of the water. Cabbage leaves, applied to a limb, have at times appeared to encourage a very copious exudation of fluid from the surface. Emetics and sudorifics have been recommended, but are not now much trusted to for promoting the discharge or absorption of dropsical waters. It is an important improvement in the cure of dropsies, that the patient is not restricted in the quantity of fluid which

he chooses to drink, but that a plentiful allowance of watery liquors is considered as rather conducive to a cure, by conveying to the kidneys any diuretic we mean to employ, and even as of itself greatly promoting their action. In ancient times, as Celsus informs us, dropsy was more frequently cured in slaves than in freemen, as they could not be prevailed upon to submit to the severe restraints which were imposed upon slaves. Friction is another means of promoting the action of the absorbents; and exercise, if the patient can take it, may have the same effect; and when the swelling is abated in the morning, skilful and equable bandaging will prevent the swelling of the legs towards night. When by these or other means, we have managed to get rid of the water already effused, our next object is to prevent its re-accumulating; and by strengthening the system, to complete the cure of the disease. Exercise, and the proper regulation of the diet, are great ingredients in this plan; and are to be accompanied by tonic medicines, as Peruvian bark, bitters, and the preparations of iron. Great attention is to be paid to the state of the bowels; and we must not neglect to keep up a proper action of the skin and of the kidneys.

Dropsy of the Belly is of two different kinds, and may occur either in the general cavity, or as connected with particular organs.

Dropsy in the cavity of the abdomen is frequently only a part of a very general disease, in which the water is effused also into the cellular texture of the whole body. It is very often the attendant or the consequent of disease of the liver, in which that organ is very much enlarged, hardened, and altered in its minute structure. This is one of the most usual consequences of the habitual and intemperate use of strong liquors. It is accompanied with considerable debility, an unhealthy appearance of the countenance, much thirst, scanty urine, loss of appetite, and other marks of what may be called the hydropic diathesis. We are to attempt the cure by diuretics, by purgatives which bring off a great quantity of watery fluids; by mercury, when we have reason to believe that a hardened liver is the cause of dropsy, taking care to support the strength, as it is so generally a disease of debility; and in cases where it is proper drawing off the water by puncture.

Another species of dropsy in the belly is that in which the fluid is collected in some particular cyst or bag; of which we have a very frequent instance in females, whose ovaries become distended with fluid in a most remarkable degree, requiring, for the ease and accommodation of the patient, to be very often let off by a surgical operation. It is a matter of considerable difficulty to ascertain the situation of the water in this species of dropsy; and the cure or permanent removal of it is generally impossible. Mercury, as a deobstruent, has been tried; but all that we can expect is occasional relief by tapping. When the dropsy is of this encysted kind, the derangement of the general health is much less than in the other kinds. The strength and appetite are little impaired, the flow of the menses continues as usual; there is little paleness or sallowness of the countenance, and the thirst, scantiness of urine, and other symptoms of general dropsy, are less urgent. Encysted dropsy is frequently a very protracted affection, and for a long time the general health suffers but little. The strength is to be supported by proper diet, assisted by bark, iron, and other tonic medicines; and tapping is to be had recourse to when the fluid is collected in great quantity Sometimes inflammation comes on, and much purulent or glairy matter is collected in various compartments of the swelled ovarium; and fever, with great debility, at last carries off the patient.

DROWNING. Death from drowning does not ensue from the lungs being filled with the fluid swallowed, but is the consequence of their being prevented from receiving the atmospheric air, which is necessary for the performance of the function of respiration; a function which

cannot be suspended in man and the more perfect animals, for even a very short period, without the most severe suffering and consequent death. While, on the one hand, we must, in the case of persons apparently dead from drowning or other accidents, omit no proper means for their recovery, and persevere long, even in very hopeless circumstances; we must, on the other hand, remember, that it is of the utmost moment, as speedily as possible, to remove the body from the water; and we should distrust all the stories of bodies having been recovered, after being twenty minutes or half an hour under water. That great physiologist, the second Monro, used to declare, that if a body had been five minutes without breathing, recovery was impossible.

Methods to be employed for Recovery of the DROWNED, *and in other cases of Suspended Animation.* Before proceeding to state the methods proper to be tried for this purpose, it may be right to caution the unprofessional reader against what should not be done. It is improper to suspend the body by the heels, or to use any violent agitation of it, with the view of getting rid of the water supposed to be in it. It is improper to have immediate recourse to the lancet, as the blood is repelled to the internal parts, and cannot be easily made to flow from a vein at the surface, so as to unload those parts. When the body is taken out of the water, it should be wrapped in dry clothes, and carried on a door, or by the help of assistants, in such a manner as not to distort the neck, or bring the chin on the breast, or the head too far back. It should be carried to the nearest convenient place, and well rubbed with warm and dry flannel, while a warm bath is preparing. In houses appropriated for the purpose of resuscitation, the water should be always ready. The patient is to be put completely in the warm bath, an assistant keeping the head out of the water. There should be no crowd of people in the room, as they both render the air impure, and embarrass those who are actively employed about the patient. An essential part of the duty of assistants, is to inflate the lungs, and imitate natural breathing. If this can be accomplished, and a little stimulus imparted to the overloaded right side of the heart, we may hope that it will be enabled to propel the blood in the proper direction, and that life may begin again to show itself. It is not thought very safe or necessary to rub any acid or stimulating substance on the body. Some hartshorn mixed with oil is all that is necessary. When any sign of life appears, a little hartshorn to the nostrils may stimulate the breathing. Some stimulus applied to the stomach may give much assistance. If the person can swallow, a little brandy or warm wine and water is one of the best we can give; and by some of the ingenious contrivances of modern art, something may be thrown in even when the power of swallowing is suspended. When any signs of pulsation begin to appear, they may be aided by slightly irritating the nostrils, by the application of hartshorn or mustard. When other means have failed, electricity has sometimes been known to rouse the action of the heart, when the shocks have been skilfully sent through that organ. The measures adopted for the recovery of drowned persons must be persevered in for a considerable time; and they must not be left to themselves when signs of reviving appear, till we are quite confident that matters are in a prosperous train. They should be put to bed, their feet being well warmed, and their shoulders raised; they should take pretty frequently, for the first few hours, some warm drink without spirits; and it will be necessary to watch, lest any tendency to inflammation and fever should manifest itself, when it will be proper to bleed according to the urgency of the symptoms. In attempting to restore animation to persons who have been hanged, pretty nearly the same measures are to be pursued; with the additional one, of taking a small quantity of blood from the head, by opening the jugular vein or the temporal artery. We

should be unwilling to say any thing to discourage the most assiduous and persevering exertions to restore suspended animation; but it is right to mention, that the accounts of recovery after very long continuance under water, as hours or days, are totally fabulous. The late Dr. Fothergill published the following popular directions, approved by the Humane Society:

I. The body should not be rolled on the ground, or over a barrel, nor lifted up by the heels, or be any other way roughly handled, or violently shook; but be removed to a convenient place, lying as on a bed, with the head a little raised, in as natural a position as possible.

II. The body, well wiped with a cloth, should be placed in a warm bed or blanket, but not too near a large fire. Bottles of hot water should be laid to the bottoms of the feet, joints of the knees, and under the arm-pits. A warming-pan moderately heated, or hot bricks wrapped in cloths, should be rubbed over the body, particularly along the back. The natural warmth of a healthy person, especially a child, lying close to the body, has been found very efficacious. The room should be kept open and airy, with few persons in it. The shirt of an attendant, or skin of a sheep fresh killed and warm, may be used to advantage. Should the accident happen in the neighbourhood of a warm bath, brewhouse, bakehouse, glasshouse, saltern, soap manufactory, or any fabric where warm lees, ashes, embers, grains, sand, water, &c. can be easily procured, it will be very proper to place the body in any of these, moderated to a degree of heat very little exceeding that of a healthy person.

III. The body being placed in one or other of the above advantageous situations, various stimulating means should be immediately employed. The most efficacious are, blowing with force into the lungs, by applying the mouth to that of the patient, closing at the same time his nostrils, throwing the smoke of tobacco up the fundament into the bowels, by means of a clyster-pipe or fumigator a pair of bellows may be employed until the others can be procured; rubbing the belly, chest, back, and arms with a coarse cloth, or dry salt, so as not to rub off the skin, or with a flannel dipped in brandy rum, or gin; applying spirit of hartshorn, volatile salts, or the like, to the nostrils, and rubbing them on the temples frequently; tickling the throat with a feather to excite a propensity to vomit, and the nostrils also with a feather or snuff to provoke sneezing. The body should at intervals be shaken, and varied in its position.

IV. If there be any signs of returning life, such as sighing, gasping, twitching, beating of the heart, return of natural warmth or colour, a spoonful of water may be administered, to try if the power of swallowing be returned; if it be, a spoonful or two of warm wine, or of brandy and water, may be given to advantage, but not before.

Early bleeding has been found pernicious, and even fatal. It is seldom applicable, though it may sometimes be employed by a person of skill to remove or prevent symptoms of inflammation.

The above methods of restoring life are applicable to various other cases of apparent sudden death, whether from hanging, apoplectic and convulsive fits, cold, suffocation by damps, or noxious vapours proceeding from coal mines, confined air of wells, caves, cisterns, or from the must of fermenting liquors.

DRUNKENNESS. *See* INTOXICATION.

DRY BELLY-ACHE. A particular species of colic, called also the Devonshire colic, or the colic of Poitou, from its occurring frequently at these two places.

Symptoms. It is preceded by an uneasy sense of weight in the abdomen, chiefly about the navel, then come colic pains, not very severe or continued, but increased chiefly after taking food; afterwards the pains become more sharp and almost constant; there is severe pain of the arms, legs, and back, with palsy and

wasting of these parts; and a remarkable falling away of the fleshy part called the ball of the thumb. Obstinate costiveness accompanies the disease, and there is sometimes a degree of strangury. Those who have had the disease are liable to relapses, which are generally more violent than the first attack; and their recovery becomes every time more slow and less complete. In some cases, where the disease is very bad, it may be eight or ten days before stools are procured. The pulse is not quicker than natural, and there is not much heat of skin at the beginning of the complaint; but from the violence of the pain, some feverish symptoms may occur, and the agony is sometimes so great as to bring on convulsions.

Causes. This very singular, painful, and troublesome disease, is owing to the introduction of lead into the body. The ways in which this may be done are very numerous. It may be introduced in the form of vapour, as among smelters; or as an oxide, in those who work with it in that form, as painters, and those who make white lead; or in a saline state, as in those who are unfortunate enough to get it in adulterated wine or cider, or in spirits, in whose distillation an ill-cleaned leaden worm has been used. This is the reason why lead, in its various preparations, though we should expect so much from its refrigerating powers, is so rarely employed internally by physicians.

Treatment. The great object is to procure free passage of the bowels, but it is often a business of great difficulty. The spasm is very obstinate, and we must have recourse to the paradoxical expedient of giving nearly at the same time something to open the bowels, and something that has usually the effect of closing them. An infusion of senna with tamarinds is to be given, a tea-cupful every hour; and after the first cupful a large opiate, which frequently has the effect of putting a stop to the spasm, and allowing the purgative to act. Blisters, as in the common colic, often relieve the pain, and finish the spasm; and in many instances, very soon after the blister rises, the bowels are opened. The purging must be regularly kept up for some time; and the strength must be restored by bark and wine, and a nourishing diet; while the palsied limbs are to be rubbed with some suitable embrocation, as the volatile liniment, or turpentine and oil, or opodeldoc.

DUCTS, the passages by which secreting glands pour their prepared fluids into the cavities for which they are intended. Thus, there are gall-ducts, salivary ducts, &c. for the conveyance of their respective fluids.

DULCAMARA. *See* BITTER-SWEET.

DUODENUM. That portion of the intestines which comes next to the stomach, so called from its length, being generally about twelve inches. Some of the most important parts of the process of digestion are performed here, viz. the intermixture of the chyme with the bile and pancreatic juice, and its formation into chyle. *See* DIGESTION.

DWINING. The Scottish name for the bad health and wasting which very often occur in children. *See* ATROPHY.

DYSENTERY. A very painful affection of the bowels, in which the patient is distressed with frequent calls to stool, with a scanty discharge of mucus, alone or mixed with blood. "The stools are accompanied with copious discharges of wind, they generally exhibit a frothy appearance, and are often attended with a sense of scalding about the anus; the patient, after each evacuation, feels considerably relieved, and hopes, but in vain, to enjoy an interval of ease." Along with this affection of the bowels, there is great dejection of spirits, prostration of strength, thirst, griping pains, and loss of appetite. The febrile symptoms are not so urgent as might be expected; there is sometimes great quickness of pulse, but no distinct local inflammation. The natural stools do not appear; and when we succeed in procuring a discharge of these, they are sometimes in

the form of hardened balls. The disease varies in its duration, sometimes the patient sinks very rapidly, at other times lingers on for a long period, the slimy stools continuing, and being mixed with purulent and bloody matter from the ulceration of the bowels.

Causes of DYSENTERY. It is a disease very common in warm climates, and is therefore to be ascribed to some peculiarity of the air or water in these places; and it is also not uncommon in camps and armies, though it may be questioned whether it occurs in these, except in situations and seasons resembling the circumstances of warm climates. It is very liable to attack Europeans who go to warm climates, especially those of the northern countries of Europe, or who, leaving Europe in the winter, are exposed within a few months to fatiguing service in a hot climate, or who indulge in fruit or other food that disagrees with the bowels. Exposure to cold air, drinking cold fluids when heated, and intemperance, are also found to be occasional causes of dysentery. The great numbers of patients affected at the same time, as in camps and ships, seems to have given rise to the opinion that dysentery is contagious; this was the opinion of Sir John Pringle, of Dr. Cullen, and others; but it is not admitted by the modern practitioners who have had so great experience of this disease in the East and West Indies. At the same time, every precaution should be taken to promote cleanliness, to remove from the sick every thing putrid and offensive, and to give as little unnecessary disturbance as possible.

Such are the symptoms and causes of the disease commonly known by the name of dysentery or flux; but the more accurate observers who have had much opportunity of seeing the bowel affections incident to Europeans in warm climates, have noticed a complaint which occurs soon after they arrive in those climates, and which they think should be carefully distinguished from the hepatic dysentery, or that form of flux which is common to those who have been long enough in India to feel the effects of the climate on the liver and other viscera. The acute disease they consider as an inflammation confined chiefly to the large intestines, not necessarily accompanied with any flux, and often making consi derable progress in an insidious manner before any urgent febrile symptoms take place. "It begins in general with much of the appearance of a common diarrhœa, occasional griping and pains in the bowels; frequent and unseasonable calls to stool, with an irresistible inclination to strain over it. The evacuations are generally copious, of a fluid consistence, and without any peculiar fœtor; they are sometimes streaked with blood, and at other times, a small quantity of blood is voided in a separate form. The pulse, in this stage of the disease, is seldom altered; and, indeed, in many of the bowel complaints prevalent in India, the state of the pulse gives us but an imperfect idea of the extent of the disease. The heat of the skin is not much increased, and the tongue is frequently but little changed in its appearance. The patient generally complains of great prostration of strength and depression of spirits, with loss of appetite and urgent thirst.

"To these symptoms succeeds a fixed pain in the lower part of the belly, more or less acute, sometimes extending towards each side, and sometimes to be traced along the whole course of the large intestines; with a sense of fulness, tension, and tenderness upon pressure; and on applying the hand to the surface of the belly, a preternatural degree of heat is frequently perceptible. The evacuations now become more frequent and less copious, they consist chiefly of blood and slime, or are composed of a peculiar bloody serum, which has been very aptly compared to water in which beef had been washed or macerated. A suppression of urine and distressing tenesmus now become urgent symptoms, the indifference to solid food increases, while there is an uncontroulable desire for liquids,

particularly cold water, which the patient prefers to any drink that may be offered to him, and from which he professes his inability to refrain, although prepossessed with the idea of its being injurious. The tongue is now, for the most part, white and furred; sometimes, however, exhibiting a florid, smooth, and glassy appearance, with a tremulous motion when thrust out; the skin is either parching hot, so as to render it even painful to retain the hand in contact with it; or covered with profuse perspiration, often standing in large drops on the surface. The pulse is still frequently but little affected; sometimes, however, it assumes a febrile quickness, without any other remarkable feature; at other times, it will be found without any great increase of velocity, but full, and bounding with a peculiar thrilling sensation under the fingers.

"This state of the pulse, whenever it takes place, always denotes extreme danger, and shows that the disease is rapidly hurrying on to that final stage in which the lassitude and dejection so conspicuous throughout its course, are now converted into the utmost degree of anxiety, depression, and fear of death. The patient frequently shows an inclination to dwell upon symptoms, which, to a spectator, would appear of minor importance. He evinces the greatest reluctance to part with his medical attendant, although fully sensible how unavailing the efforts of medicine are likely to prove. The discharges by stool, which are frequently involuntary, are now accompanied with the most intolerable fœtor; they are frequently mixed with shreds of membrane and quantities of purulent matter. The pulse sinks, the pain ceases, and delirium supervenes; a frequent hiccup, accompanied with vomiting, becomes distressing to the patient; the features change; his skin is covered with a cold clammy sweat, a cadaverous smell is emitted from the body, and death soon closes the scene. The disease frequently proves fatal within a week and at other times its duration is protracted to two or three weeks." (Sir George Ballingall *on the Diseases of India.*)

The appearances found on examining the bodies of those who had died of this form of dysentery, were principally inflammation of the large intestines, without the smallest trace of disease in the structure of the liver. In some cases, parts of the gut are found to have given way, so as so permit the escape of air, and even of fæces into the cavity of the belly.

Sir George Ballingall observes, that during the first years of his service in India, the two forms of dysentery were often met with in practice, perfectly distinct; but latterly they were often more and more blended together, and were to be found in all possible varieties of combination. The two forms of the disease were often found co-existent and running insensibly into each other; and it was by no means uncommon to find them existing alternately for weeks or months, and destroying the patient by a form of flux, the symptoms of which alternately bore a nearer relation to one or other of the diseases above described.

Treatment. When we are called to treat dysentery in its early stages, and when it occurs in young and healthy Europeans on their first arrival in India, putting on the form of inflammation of the large intestines, general bleeding is highly necessary; but in other circumstances, the employment of this remedy does not seem to be called for. If there be a fixed pain in any part of the abdomen, increased on pressure, the application of numerous leeches is very proper. The earliest and most important indications, in the cure of dysentery, are to restore, if possible, the free discharge of natural stools, and to relieve the distressing gripes and straining. This is to be attempted by mild but effectual purges, which are of considerable bulk in themselves or in the modes of their administration, such as castor oil, and the neutral salts. Calomel alone, or calomel and jalap in full purga-

tive doses, given twice on an early day of the disease, and followed up on the next by a dose of sulphate of magnesia, or of senna, will sometimes put an end to the disease. Indian practitioners seem to trust a good deal to calomel, given so as to produce its mercurial effect on the mouth; and they even think the patient safe when the mouth begins to be affected. It is necessary however to interpose effectual purgatives, and to procure a free discharge, if we can, from the bowels. It is not uncommon too, to introduce mercury into the system, by giving the blue pill three or four times a-day, and by rubbing mercurial ointment on the surface of the body. A gentle salivation has certainly appeared to do good in dysentery, but we must not trust to it, to the exclusion of other articles which act more directly on the bowels. The severe tenesmus tempts to the use of opiates, but it is almost solely in the form of glysters that they can be safely administered. Opium and ipecacuan, in the form of Dover's powder, or opium with an antimonial, seems to do good by allaying pain, and producing a copious perspiration. When sudorifics are employed in warm climates, smaller doses are found to produce the desired effect, than what are necessary in colder regions. The use of astringents of every kind, in the early stage of dysentery, it is to be hoped, is completely exploded. The warm bath and warm fomentations are to be used for the griping pains; and even a large blister over the abdomen is advisable in certain cases. If the disease does not yield to the above treatment, there is much reason to fear that it will go into the chronic state, and prove a source of much embarrassment to the physician, and much suffering and danger to the patient. In chronic dysentery, the patient is still greatly troubled with pain of the bowels, with scanty stools, discharge of much mucus, and now more distinctly streaked with blood and pus; the food is ill digested, and passes off very little changed; he becomes much emaciated, his strength sinks, and he is gradually reduced to a great degree of weakness, ending in death. The plan of treatment is to support the strength by mild nourishment; to keep up a regular action of the bowels by castor oil, and other mild laxatives, to give mucilaginous drinks; and cautiously to venture on some mild astringent medicines, if we succeed in having a pretty free discharge from the bowels. The bark and other tonics are advisable, and those who have been long ill in warm climates, should remove to a more temperate one. In camps, there ought to be great care taken to prevent all accumulation of filth, to keep the sick by themselves; and as far as possible to take the disease under our care in its earlier stages; as it is very unlikely that it will be got the better of, if it passes into the chronic state.

DYSMENORRHŒA. Difficult or painful menstruation. *See* MONTHLY DISCHARGE.

DYSPEPSIA. A term signifying indigestion or stomach complaints in all their varieties. *See* STOMACH COMPLAINTS.

DYSPNŒA. Difficulty of breathing; rather a symptom of other diseases, than to be treated as a primary one. *See* ASTHMA, CATARRH, PLEURISY, CONSUMPTION, &c.

DYSURIA. Pain or difficulty of passing urine. This may arise from various causes, and requires to be treated accordingly. If from inflammation of the passages, this is to be removed by local bleeding, by purging, and the other remedies proper in such cases; if from spasm, this is to be relieved by opium, the warm bath, or other antispasmodics; if from stone in the bladder, this is to be primarily attended to. Dysuria is often very troublesome to children. The pain appears to be very great, as they shriek long and violently, and seem ready to go into fits, but on getting the urine passed they instantly become quiet. The prejudices of nurses are in favour of giving gin on such occasions, and its diuretic powers

may be useful, provided the quantity given be only a few drops, and those largely diluted. A little very thin gruel, with a few grains of the carbonate of potash, and a drachm of the spirit of sweet nitre, may be taken. The bowels are to be kept open by manna or castor oil; and in the paroxysms of pain, the child is to be put into the warm bath up to the waist, or to have warm fomentations and gentle friction applied to the lower part of the belly.

E

EAR

EAR

EAR. The organ of the sense of hearing is composed of an external and internal part. The extremely complex, though beautiful structure of the ear, could not be described in such a way as to convey much information to the general reader; our account of it shall therefore be very brief. The external part, or conch, is what we see at the side of the head, composed of various folds and depressions; in the middle is a passage leading to the membrane of the drum, which divides the external from the internal parts of the organ. In this passage is contained the *cerumen* or wax of the ear, bitter and tenacious, to bar it against the intrusion of insects. Behind the membrane is the drum, an irregular cavity, containing four little bones, and having four openings. The drum is terminated by the labyrinth, in which are situated the cochlea, the vestibule, and the semicircular canals. The whole of the cavities are situated in the hardest part of the temporal bone; they are lined with a thin membrane, and filled with a limpid fluid. The vibration of this liquor is the last corporeal occurrence in the function of hearing. The nerves are the soft portion of the seventh pair.

EAR, Diseases of. "An organ so valuable and necessary to the perfection of our existence as the ear, should have all the resources of surgery excited for the preservation of its integrity, and the removal of the diseases with which it may be affected. What, indeed, would have been our lot, if nature had been less liberal, and not endued us with the sense of hearing? As Leschevin has observed, we should then have been ill qualified for the receipt of instruction; a principal inlet of divine and human knowledge would have been closed; and there being no reciprocal communication of ideas, our feeble reason would never have approached perfection. Even our life itself, being, as it were, dependent upon all such bodies as surround us, would have been incessantly exposed to dangers. The eyesight serves to render us conscious of objects which present themselves before us; and when we judge them to be hurtful, we endeavour to avoid them. But, to say nothing of our inability of looking on all sides at once, our eyes become of no service to us whenever we happen to be enveloped in darkness. The hearing is then the only sense that watches over our safety. It warns us not only of every thing which is moving about us, but likewise of noises which are more or less distant. Such are the inestimable advantages which we derive from this organ. Its importance when healthy, makes it worthy of the utmost efforts of surgery when diseased." (Cooper's *Surgical Dictionary*.)

1. The external ear may be lost by violence, as by cutting, or the bite of an animal. If we see it soon after an accident, and find it much lacerated, we are to endeavour its reunion by plasters, and even by sutures, if necessary. When a band-

age is applied, it should be moderately tight, as pressure in this place gives considerable uneasiness. Wounds, and loss of a part, or even the whole, of the external ear, do not always occasion deafness. If this occurs from such a cause, an ear-trumpet or similar contrivance must be used. 2. Sometimes the external ear is not perforated, and deafness is the consequence, at least in general. This is to be remedied by a surgical operation, varying according to the nature of the obstruction. If it be merely a membrane stretching across the passage, it is simple enough to remove the obstruction; but if the cartilaginous or bony sides cohere, the cure is of much greater difficulty. When the obstruction is not quite close to the membrane of the drum, it has been proposed to touch it with caustic, and to introduce a little tent to keep the passage open for some time afterwards. 3. Foreign bodies, as pease, bits of glass, or cherry-stones, may get into the ear, and occasion great pain of the part, as well as impaired hearing. Such bodies have been known to occasion for many years excruciating pain of the head, palsy, convulsions, and other distressing symptoms; all which have ceased when a skilful hand has extracted the offending body. Such bodies should be forced out, if possible, by the injection of warm water, and the application of a small scoop or bent probe. Worms have been known to produce very violent symptoms by being hatched in the ear. When there is disease, as ulceration or suppuration in the ear, insects are attracted by it, and deposit their eggs, which in time produce worms. Patients so affected should take care to stop the ear when they go to sleep in summer and autumn, as Morgagni advises. A slight infusion of tobacco in oil of almonds may be dropped into the ear; and this proves fatal to worms. 4. A very frequent cause of deafness or impaired hearing, is the obstruction of the passage by thickened or hardened wax. The symptoms arising from this cause are deafness, a sensation as of a noise or clash when eating, or of heavy sounds as of a hammer. This kind of deafness is not very difficult of cure. A little olive oil, or oil of almonds is to be dropped into the ear, and retained there by a piece of cotton; and when the wax is softened, it is to be taken out with a small scooped instrument. Injecting warm water with a little soap by a syringe, is a method of getting rid of the hardened wax, equally simple and efficacious. 5. A deficiency of the wax may occasion a degree of deafness. When this is the case, we are to drop in two drops every night of the following mixture: pyroligneous acid, sulphuric ether, oil of turpentine, equal parts; three drachms of the tincture of meadow saffron in six ounces of distilled water are to be taken at the time. The bowels must be kept easy. When the wax is of bad quality, which is known by its deviation from the healthy colour and consistence, it may be improved by frequently washing the passage; and giving, once or twice a-day a wine-glassful of the infusion of quassia, with a tea-spoonful of equal parts of rhubarb and magnesia. (BUCHANAN'S *Acoustic Surgery.)* 6. Discharges of matter take place from the passage, in consequence of inflammation going on to suppuration, from scrofulous ulcers, from abscesses after fevers, from small-pox, measles, and other causes. These discharges not unfrequently are attended with the loss of the small bones; and in general total deafness is the consequence. Exposure to cold frequently produces inflammation about the ear, attended with very acute pain, (commonly termed ear-ache) which continues very troublesome and even alarming, till the patient is relieved by the discharge of matter. This inflammatory state is to be treated by local bleeding, the injection of tepid water, and by fomentations; and the passage should be protected from cold air, by the introduction of wool or cotton. 7. Sometimes there is disease in the drum, attended with a fetid, purulent discharge, which, making its appearance at the internal

opening, shows that the membrane of the drum is destroyed; and so much disease is in the internal parts, that the small bones are discharged externally. In time, a continual discharge from the ear takes place, and the disorganization is so complete, that a total loss of hearing is the consequence. If this disease be noticed in its early stage, if there is acute pain, followed by a discharge of matter, we know it is from inflammation, and we are to palliate or remove this by topical bleedings, and other antiphlogistic means; and are on no account to inject stimulating spirituous fluids. When the disease threatens to be more chronic, we are to use blisters and setons as auxiliaries to our cure; to employ laxative medicines, and to foment the part; and when there is little active inflammation, to throw in astringent injections, as of sulphate of zinc. If there are fungous growths, they are to be touched with caustic. 8. Sometimes there is deafness from insensibility of the nerves of hearing, though the structure of the parts may be perfect. If we can ascertain this to be the case, we are advised to put the patient on low diet, and to give saline purgatives once or twice a-week, applying blisters occasionally behind the ears. The application of electricity may be tried.

EAR-ACHE is a very common and painful complaint, occurring often to adults, and also to infants and children from teething, and from exposure to cold. When a child is feverish, and cries much, putting the hand frequently to the ear, we may suspect this complaint; and may sometimes check it by applying a large poultice of bread and milk, with a little oil, and renewing it every three or four hours. A purgative is also to be given. If suppuration takes place, the matter is commonly discharged, and considerable relief is experienced. Some warm milk and water should be carefully thrown in by a syringe three or four times a-day, to wash out the matter. In some cases, there is a discharge of ill-smelled matter for weeks or months, with a degree of deafness. This is best treated by the frequent injection of warm milk and water, and by applying a succession of blisters to the back. The strength is to be improved by tonic medicines, as some of the preparations of iron or bark.

EARS, SORE, OF CHILDREN. This is commonly meant to express those runnings from behind the ears of children, which are so frequent with them. They are sometimes very painful, and attended with a great discharge of matter; but it is not safe to check this running suddenly; and when it occurs about the time of teething, it is salutary, as lessening the irritation produced by that process. It is sometimes even useful to *make* sore ears, by inserting behind them a piece of tape, spread with blistering plaster. But, provided we are not too hasty in checking the discharge, and provided we relieve the system by proper attention to purging, we may heal up the sore ears, by washing with an astringent wash, made of sulphate of zinc and rose-water, or with a little alum and water; and when the acrid matter is likely to fall down, and excoriate the neck and neighbouring parts, we are to prevent it by tutty or other absorbent powders; and to make a discharge at some distance, by dressing a portion of the sound skin with blistering ointment. If the inflammation about the ear is considerable, with fiery-looking pustules, we are to apply emollient poultices; and when the inflammation is abated, we are then to use an astringent or cooling wash.

EAU DE COLOGNE. An aromatic tincture of great fragrance and pungency, much used at the toilet all over Europe, and sometimes given internally where a powerful stimulus is required. It receives its name from the city where it has been manufactured for more than a century, by the members of a family of the name of Farina. The Cologne water is, of course, loudly vaunted by its proprietors, as superior to all other imitations of it made

in Paris, London, and elsewhere; though these are sometimes so well made, as to receive the approbation even of those who think themselves judges of the matter. The following receipt is said to make a spirit which some have preferred even to the genuine Eau de Cologne. Take of spirit of wine half a pound; lavender water, one pound; balsam of Peru, fifteen drops; essence of lemons, six drachms; camphor, fifteen grains; spirit of rosemary, half a drachm; bergamot, half a drachm. Digest for seven days, and strain.

EAU DE LUCE. A nostrum used in nervous diseases; as a substitute for which the London college direct the spirit of hartshorn with amber. The dose is twenty or thirty drops in an ounce of camphor mixture. In India, it is believed to have some efficacy in the bites of snakes, in those cases where stimulants are used.

EAU MEDICINALE D' HUSSON. A vinous infusion of *Colchicum autumnale*, or meadow-saffron, which has obtained great celebrity in the cure of gout. Mr. Brande says, that in gout, colchicum may almost be called a specific, for it very rarely fails to break up the paroxysm; sometimes acting upon the bowels, at other times, upon the kidneys and skin, and often without any apparent accompanying effect. The dose is from half a drachm to a drachm of the vinous infusion. Sir Everard Home recommends the wine of meadow-saffron as a substitute for the *Eau Medicinale*, in rheumatism, gout, and dropsy; and there is no doubt that it produces similar, and sometimes even fatal effects. Dr. Scudamore has ably treated of these pretended specifics in gout, and condemns them as ultimately injurious. We must therefore again caution patients not to be led away by the boasted virtues of any nostrums.

ECLAMPSIA. A name applied by some nosologists to acute epilepsy. It is now chiefly appropriated to that very violent and alarming form of it which occurs in pregnant women. *See* PREGNANCY.

ECLECTICS. These were a class of ancient physicians, who refused to acknowledge the exclusive authority of any masters in the practice of physic; and selected alike from Dogmatists and Empirics, whatever knowledge they thought consonant to truth, and whatever practice they thought would be beneficial to their patients. In this they certainly acted more wisely than any of the other sects, although much of the advantage of this mode of proceeding depends on the knowledge, sagacity, and good sense of those who profess to make such selection. The physiologist who undertakes to explain the actions of the living body, is quite incompetent to the task, unless he be an Eclectic in the most comprehensive meaning of the term. From most of the physical sciences must he draw his principles, for the explanation of the different functions of the animal economy. Without the knowledge of optics he cannot explain the bodily part of the sense of sight; without dynamics he cannot explain muscular action; and without chemistry, the various component parts of the solids and fluids cannot be described, nor the nature of the urine and urinary calculi be investigated. To all those sciences, the physiologist must add an intimate acquaintance with the structure and functions of the living body, and to attain this he must select his illustrations from many departments of nature. If such variety be necessary for the physiologist, it is no less so for the pathologist and physician. He must cull his knowledge from many quarters, and must be fully resolved, *nullius jurare in verba magistri*, whether that master be Galen or Paracelsus, Cullen or Brown. He must be neither a partisan of the humoral pathology nor of the mechanical, the chemical nor the nervous; and must not ascribe too much to atony or spasm, to gastric irritation, to sympathy, nor to derangement of the chylopoetic viscera. Selecting from the best authors and from kindred sciences, whatever accurate investigation has adjudged to be true, he must furnish himself with the principles of sound philosophy, and then observe nature for himself in the various

workings of the animal economy, both in health and sickness. In modern times, the illustrious Boerhaave was long thought the model of a genuine Eclectic.

ECTROPIUM, a disease of the eyelid, in which it is turned out. *See* EYELID.

ECZEMA. A cutaneous disease, for which there is no popular name; but which is characterised by an eruption of small vesicles on various parts of the skin. These arise principally from some irritation, as from the heat of the sun or air in the summer season and in warm climates, as we see on the back of the hands and on the face; also on the neck and forearms in women. The eruption continues for two or three weeks, and there is not much internal disorder. Little can be done by medicine; much washing and rubbing is hurtful, and ointments and stimulants are to be avoided. Simple washing with tepid water relieves the smarting and tingling. Some persons have an eruption of this kind and even more severe, by the application of acrid substances; thus it occurs sometimes in grocers from handling sugar, and is then called the grocer's itch; and masons and bricklayers may have it from the touching of lime. Similar eruptions are also produced by the irritation of blistering ointment, not only where the blister has been applied, but at some distance from it, and the eruption has a number of hard swellings and boils intermixed with it. The irritating cause must be removed, and emollient poultices applied to diminish the heat and uneasiness, and to bring the boils to a suppuration. Even a common bread and milk poultice often or long applied to a place, has sometimes a similar effect. In this case, the poultice must be left off, and simple dressing applied.

ECZEMA *from Mercury*. Another eruption of this kind is produced by the irritation of mercury, applied in any way to the system. In some cases, this is a very severe affection, and the skin is exceedingly tender and irritable. This is to be allayed by frequent washing or fomentation, with warm gruel or strained bran and water, as Bateman recommends; and the warm bath is an important remedy. If the outer skin has peeled off, a little cerate of litharge is to be applied thickly spread on linen. All stimulating food and drink is to be avoided, and the bowels are to be kept open by mild laxatives. A gentle perspiration during the night is to be promoted by antimonial medicines; and the sulphuric acid or elixir of vitriol may be given through the day, as cooling and refreshing to the patient.

EFFERVESCENCE. The frothing occasioned by the escape of an aeriform body, when substances are mixed together, whose chemical action is to unite some of the ingredients, and to allow the whole or part of the others to escape in the form of gas. Instances of effervescence may be seen when vitriol or vinegar is poured on chalk or marble, or when lemon-juice is mixed with carbonate of soda, or of potash.

EFFERVESCING DRAUGHTS are made by dissolving a drachm, or a drachm and a half of carbonate of soda, of potash, or of ammonia, in an ounce of water, and mixing with this an ounce of lemon-juice, with a little water and sugar; or if lemon-juice cannot be procured, dissolving a drachm of crystallized citric acid or tartaric acid in an ounce of water, and adding this to the alkaline solution. The two solutions when they meet, occasion by their mutual action, an effervescence by the escape of carbonic acid; and should be swallowed while this action is going on; or the one may be swallowed before the other, that the action may take place in the stomach. The medicinal virtues of the effervescing draughts are to check vomiting, and to determine to the skin; hence they are very useful in a variety of diseases, especially feverish and dyspeptic complaints. The materials for making effervescing draughts are kept in the shops under the name of soda powders, and directions are given for their use. They are thought to give relief in the symptoms of indigestion which follow over-indulgence in eating or drinking.

EGGS. Besides the shell, and an investing membrane, eggs contain the white, consisting principally of albumen and water; and the yoke, consisting of water, oil and albumen, destined for the food of the chicken before it leaves the shell. The eggs in most common use are those of the common dung-hill fowl, of ducks, and of turkeys.

As an article of food, eggs are very much used, as they contain in a small bulk a great deal of nutritious matter. When soft boiled, eggs are very easily digested, but when hard boiled, they form a very indigestible mass, requiring very strong powers of the stomach. If a person in health is going on a journey, where he will be long of getting food, one or two hard-boiled eggs, taken before setting off, will keep off the sensation of hunger for a considerable time.

If the stomach be out of order, eggs are apt to disagree, and either alone or in puddings they are to be abstained from. An egg, for a healthy child, is a good article of diet, but in many of the disorders of the stomach and bowels to which children are so liable, eggs, and puddings made with eggs, are inadmissible; and for children, eggs ought to be soft boiled, and a due quantity of bread eaten along with them.

ELATERIUM, a substance that subsides from the juice in the fruit of the wild cucumber, *Momordica Elaterium*, surrounding its seeds. It is remarkable for its powers as a cathartic, producing copious watery stools; hence it is used in dropsy; and in many cases, evacuates the water, when other cathartics and diuretics have failed. It is a medicine of much uncertainty in its operation, and requires therefore to be given with the greatest possible caution; an over-dose of it occasions violent purging, attended with great debility. Dr. Paris has lately examined very particularly the elaterium of commerce, and considers its active properties to reside in a vegetable proximate principle, not hitherto noticed, to which he gives the name of *elatin*. The dose of good elaterium, as it occurs in commerce, he says, is about one grain; but it is better to give it only to the extent of half a grain, or a quarter of a grain at a time, and to repeat that dose every half hour until it begins to operate. It is probably, when thus managed, the best hydragogue cathartic which we possess; it differs, however, from the class of remedies to which it belongs, for it excites the pulse and whole system so as to produce a considerable degree of febrile action.

ELDER, *Sambucus Ebulus*. A water distilled from elder-flowers, acquires their peculiar odour, and is sometimes used to compose part of an eye-wash.

ELECTRICITY. For the physical properties of electricity, and the method of its manifestation, with the description of the various electrical machines, we refer to the books of natural philosophy. With respect to its powers on the human body, they are those of high excitement; and when applied in too great a quantity, or too much concentrated, electricity destroys life, as we see in persons killed by lightning. Electricity is employed in the form of sparks or shocks in various cases of debility and want of nervous action; as in those cases of blindness which arise from want of sensibility of the optic nerve, or its expansion of the retina. It is used, in palsy of the various parts of the body, and in rheumatism after it has long existed, and when it has passed into the chronic stage. It has also been used in those diseases of the uterine system, which are accompanied with want of action, as the non-appearance or suppression of the monthly discharge; and it has been known to impart a healthy action, and the power of conception even to females who had long been barren. In all diseases attended with any inflammatory symptoms, electricity would be improper.

ELECTUARY. A form of giving certain medicines, chiefly powders, which are mixed with syrups and other substances into such a consistence, that the mass shall neither be too stiff to swallow, nor so thin as to allow the powders to separate; and that a dose can be easily

taken upon the point of a knife. The principal electuaries at present in use are those of senna, of catechu, of scammony, and of opium, the particular virtues of which may be learned from the respective articles whose name they bear.

ELEPHANTIASIS. A disease so named from the legs of the patient becoming scaly, rough, and very large, like the legs of an elephant. It is called the Barbadoes leg, or the glandular disease of Barbadoes, from its being very common in that island. It sometimes comes on gradually, but more generally with a slight fever, and a pain in one of the glands of the groin, which after a time becomes swelled, hard, and inflamed. A red streak is seen running down the thigh to the leg; though the fever abates, the swelling increases, and the fever may even return at uncertain periods, leaving the leg with many swelled veins, the skin rough and rugged, and the cellular substance thickened. The disease may continue many years, without the patient's health being affected, though he has great inconvenience in drawing the affected leg after him. At the first attack, an emetic and purgative may be given, and afterwards medicines to promote perspiration. The diet and medicines employed should be such as contribute to the strength of the vital powers. Mercury has been thought rather injurious, but sometimes it has done good. When the disease has thoroughly affected the leg, there is little hope of a cure, the organization of the skin being completely altered.

"In this state the swelling is hard and firm, and entirely free from pain. The skin is thickened and much hardened; its blood-vessels are enlarged, particularly the external veins, and the lymphatics distended; the cellular substance is flaccid, and sometimes thickened, and its cells much loaded with a gelatinous fluid. The muscles, tendons, ligaments, and bones are generally in a sound state. In this advanced stage, the disease is altogether irremediable; and, indeed, little success seems to have attended the practice employed in the earlier stages, which has been chiefly directed to alleviate the febrile paroxysms by laxatives and diaphoretics, and subsequently to strengthen the system by bark. Local bleeding has never been employed, for there are no leeches in Barbadoes, according to Dr. Hendy; but after the fever and inflammation have subsided, he strongly recommends the binding of the limb in a tight bandage, as the means of exciting absorption and of reducing the swelling." (Dr. BATEMAN.)

It may be useful to mention, that the term *Elephantiasis* is confined by practitioners of the present time to the local affection of the leg above described; but that the Greek writers applied it to a *tubercular* disease of the skin. Through the inaccuracy of translators, the term has been applied to *Lepra*, which should be confined to a *scaly* disease; and much confusion has been introduced into medical writings on these subjects by these inaccuracies. (*See* BATEMAN'S *Synopsis of Cutaneous Diseases.*)

ELIXIR. A term formerly applied to many preparations resembling compound tinctures. It is now but little used. We have the Elixir of Vitriol, a compound of sulphuric acid and aromatics, a good stomachic in the dose of ten drops, or twenty in a glass of cold water; and the Paregoric elixir, or ammoniated tincture of opium, or camphorated tincture of opium, useful in coughs and catarrhal affections. *See* CATARRH.

EMBROCATION. A fluid application for rubbing any pained or diseased part of the body. Embrocations are made with spirits, or by decoction or infusion. Embrocations are useful for sprains, bruises, rheumatism, chilblains; and rubbing the breast with certain stimulant embrocations, often does good in hooping-cough.

EMETICS. Medicines which have the power of evacuating the contents of the stomach, independent of their quantity or any nauseousness in their taste or odour. Vomiting is now regarded by the most accurate physiologists as depending not only on the stomach, but also on the

nervous energy transmitted by the brain to the several muscles concerned in that evacuation. Certain states of the brain are well known to hinder the action even of the strongest emetics. When the energy of the brain is suspended by complete intoxication, or by violent blows or contusions on the head, repeated doses of strong emetics will not produce vomiting; but it is curious to remark, that a less degree of violence applied to the head, and the beginning of intoxication, have the effect of rendering the stomach more irritable, and vomiting is then easily excited. Certain narcotic poisons, as the deadly nightshade, diminish the nervous energy to such a degree, that it is not transmitted to the muscles of the belly and to the diaphragm, so as to enable them to excite vomiting; and hence very large doses of emetics are in such cases resisted; but if the narcotic poison be counteracted by the draught of a large quantity of some vegetable acid, then the energy of the brain is restored, and vomiting takes place. We must be careful in such cases not to continue throwing in additional quantities of the emetic, for the fault is not in the stomach, which may retain all its sensibility, and, by the substances applied, may have fatal inflammation brought upon it. Another instance of the action of vomiting being caused by some influence first excited in the brain, is that induced by certain motions, as swinging, whirling, and sailing, and by the recollection of disgusting objects.

When an emetic is taken into the stomach, some time, from ten to twenty minutes, elapses before any effect is perceptible; then an uneasy feeling, termed sickness or nausea, which increases till the vomiting begins. The duration and severity of this preliminary stage varies with different emetics; sulphate of zinc acts without occasioning much nausea, while tobacco produces a distressing degree of sickness, much greater in proportion than its emetic power. In some cases, the nausea is more likely to do good than the vomiting, and the proper emetics are to be selected accordingly During nausea, the countenance is pale and shrunk, the pulse is feeble and irregular, and there is a feeling of cold; when vomiting commences, the face is flushed, and the pulse is quicker and stronger. When the vomiting has ceased, there is a degree of languor, an inclination to sleep, and a general moisture on the skin. When the time of giving an emetic is in our power, it is best to do it in the evening, and to let the patient retire to bed soon after its operation. At whatever time of the day an emetic is administered, cold should be avoided. The action of an emetic is promoted, and also rendered less painful, by the drinking of copious draughts of warm water, chamomile tea, or any other warm liquid.

Emetics are beneficial either by their primary effect of unloading the stomach, or by the effects which they produce on distant parts by sympathy, as on the lungs or kidneys; and sometimes the mere concussion of the body during their operation is the circumstance which is of service.

Of the various diseases in which the giving of EMETICS *is useful.* The administration of an emetic is a very proper and necessary proceeding in a great variety of cases. When any disorder arises from the presence of too great a quantity of matter taken in, or from the presence of acrid indigestible matters, or when poison has been swallowed, vomiting gives speedy relief. Emetics are usefully given, at the commencement of *feverish diseases*, and they are still more useful if we can so regulate them as to procure not only an emetic, but also a purgative effect. Emetics are also given in *catarrh*, and various disorders of the chest; and they are found to promote expectoration, and otherwise to alleviate these disorders. Nature seems to have pointed out vomiting as a mode of relief in *hooping-cough*, and in imitation of this salutary effort, emetics are freely administered in that complaint. From the mechanical effect of vomiting in pressing various parts of the cavity of the belly, emetics are sometimes given in *jaundice*, with a view to force into the bowels the

concretions which choke up the bile-ducts; but this is a practice too hazardous to be often repeated. Emetics have been known to promote the cure of *dropsy*, probably by the agitation which they give, tending to promote the action of the absorbents. By diminishing the doses of emetics, we may produce only sickness, without going the length of full vomiting; and in this way we can promote perspiration and diminish inflammatory action. There are certain states of the system in which it would be unsafe and improper to use emetics. Thus in plethoric states of the body, and where there is great determination to the head or lungs, vomiting is not free from danger; and in the advanced stages of pregnancy, in rupture, and in falling down of the womb, emetics are to be avoided.

Many substances are famed for possessing emetic powers, but being in possession of a few good and certain ones, it is needless to trouble ourselves in the search of a useless variety. Those in most common use are the powder of ipecacuan, the preparations of antimony, and the sulphates of zinc and copper. Ipecacuan is a mild and safe emetic, which may be given to the youngest subjects. The dose for an adult is from fifteen to twenty grains; and should we, by any accident, give too much, the worst that can happen, is to produce vomiting a little more speedily than we wish. For children, the dose may vary from six grains and upwards, according to the age; or when no inflammatory symptoms forbid, they may get it infused in wine, a tea-spoonful every ten minutes till it operates. The best and most manageable antimonial is the tartar emetic, of which two grains are a full dose. It is seldom we give this quantity at once; the best way is to dissolve two grains in four ounces of warm water, and of this solution, to give a table-spoonful every ten or fifteen minutes till it operates. Tartar emetic acts even when introduced into the veins of an animal. Tartar emetic is also soluble in wine, in the proportion of two grains to the ounce. The dose of this antimonial wine is from two to four drachms. Fifteen grains of ipecacuan combined with one of tartrate of antimony, make a very effectual emetic; and the action of vomiting may be promoted by drinking copious draughts of warm water or chamomile tea. The sulphate of zinc is a useful emetic when we wish a very speedy and effectual one, as in cases where poison has been swallowed, especially laudanum; though perhaps emetics in such cases may be superseded by the lately re-invented stomach-pumps, orthe syphon of Mr. Bryce. The dose of sulphate of zinc as an emetic, is thirty grains. For the same purpose, the sulphate of copper is used, but in much smaller doses, viz. from six to ten grains; but as being itself rather poisonous, its use is more rare. When metallic poisons have been swallowed, there is commonly so much vomiting, that no emetic is needed; and we are rather to use diluents and the substances proper to neutralize such poisons, or to counteract the succeeding symptoms which are likely to occur; whether they be debility, affections of the nervous system, or inflammation.

EMMENAGOGUES. Medicines supposed to have the power of acting on the womb, and promoting the menstrual discharge. It is now acknowledged by all judicious physicians, that we know of no substance which has a direct and specific action on the womb; and that whatever success any means may appear to have had, in producing the monthly discharge, this is owing to some action on the whole system, or on the neighbouring parts, from which that action has been communicated by sympathy to the womb. The non-appearance of the menses in young women, or their obstruction in those who have had them established for some time, is generally owing to some disorder of the system; and whatever removes this, and produces the wished-for discharge, may be styled an emmenagogue. Sometimes tonics, sometimes purgatives, have this effect; or if the system be too ple-

thoric, bleeding may contribute to bring the discharge. Electricity, aloes, cantharides, turpentine, cupping on the loins, or warm fomentation, may all be useful, when directed by a practitioner of skill to know the proper time and manner of their exhibition. Sometimes good air, exercise, and a regulation of the diet, are all that is required to establish the monthly discharge. Women are very apt to lay a great stress on the importance of this function, and to be very uneasy if it be too long of becoming regular; but there is no fixed period for its beginning, and while the health is uninjured, they should not take strong medicines with the view of forcing on the discharge.

EMOLLIENTS are those remedies which, when applied to the solids of the body, render them more soft, lax, and flexible. These are principally oily substances applied by friction in a warm state, or they are the various forms of fomentations and poultices.

EMPHYSEMA signifies a swelling from the presence of air, and is generally applied to the diffused swelling which happens from air getting into the cellular substance. Emphysema is known by a soft puffy swelling; the skin is glossy; the tumor yields to pressure, but returns as soon as the pressure is withdrawn, and a crackling noise is heard when any part of the swelling is pressed. Emphysema most commonly arises in consequence of injuries to the pleura investing the lungs, as by a sharp-pointed instrument, or by a fractured rib. It is sometimes brought on by the strong exertions of respiration during labour. When the lungs are wounded, there is troublesome cough, and the expectoration is sometimes mixed with blood; and when air escapes into the cavity of the chest, forming the disease now called pneumo-thorax, there is great difficulty of breathing, anxiety, a sense of suffocation, lividness of the countenance; and death ensues unless relief is speedily obtained.

Treatment. If a wound be the cause of emphysema, it must be closed up and healed in the usual way, and it may be necessary to lessen inflammatory action by blood-letting, which will require to be repeated if there is much pain, or if the breathing is quick and laborious. The air is to be evacuated from the cellular substance by a number of small incisions or punctures; and this is also to be done in those cases where emphysema occurs in consequence of the efforts of labour, if the breathing be much affected; but in general this emphysema disappears without much trouble. When air has got into the cavity of the thorax, as well as into the cellular substance, and occasions great difficulty of breathing, an opening is made into the cavity of the chest to give it vent. The best place for performing the operation, if the disease is on the right side, will be on the fore part of the chest, between the fifth and sixth ribs, for there the integuments are thin; and in the case of air, no depending drain is required. But if the disease is on the left side, it will be more advisable to make the opening between the seventh and eighth, or eighth and ninth ribs, that we may be sure of avoiding the pericardium. As large penetrating wounds are inconvenient on account of the air entering by the aperture in such a quantity as to prevent the expansion of the lungs, a small wound will be eligible, especially as air does not require a large one for its escape. It is better to dissect cautiously with a knife, than to employ the coarse and hazardous method of thrusting in a trocar. (Mr. Hewson.)

EMPIRICS. The name of a sect of physicians in ancient times, who professed to be guided in the practice of physic by experience alone, and who discarded as unnecessary all acquaintance with the structure of the body, or reasoning on its functions. Obvious and indisputable causes of disease, they admitted as necessary to be known; but they considered as superfluous, all inquiry into obscurer causes, or natural actions, as respiration, digestion, and assimilation. If patients treated themselves, some in one

way and some in another, they observed which plan succeeded best, and treasured up the result of the experiment as the rule for their practice in similar cases. They said, it was of no moment what caused a disease; our business is to know what cures it; we need not inquire into the manner of digestion, but observe what is best digested; nor into the mode of respiration, but how we may best restore its healthy state when it is oppressed. Dogmatists may argue plausibly on both sides of a question; genius and eloquence may gain the victory; but diseases are cured not by fine talking, but by remedies. Anatomy they held in great contempt; they considered the appearances in the dead body as totally different from the living; and therefore useless to be known. If accident presented to them the internal parts of a man, as when a gladiator fell in the amphitheatre, or a soldier in the field, they condescended to look at them; and maintained that a sagacious physician, by seeing a variety of such cases, would acquire a sufficient knowledge of the position, arrangement, and shape of those parts; and this, while engaged in the benevolent purpose of restoring health, and not in the butchery of anatomizing the living body. Dissection of the dead subject they thought to be unnecessary; though not cruel, it was disgusting; and they were satisfied with what knowledge could be gained from the living in the progress of their cure.

The term *Empiric* is applied in modern times to those who practise physic without a competent education or knowledge of their profession, and who pretend to wonderful cures by the use of some nostrum which they sell for their own advantage.

EMPYEMA signifies a collection of purulent matter within the cavity of the chest. This suppuration is generally the consequence of pleurisy, and is suspected to be present, when there is an abatement of the previous pain, with continuing difficulty of breathing, cough, and hectic fever; while the patient in general cannot lie easily, except on the side on which the collection of matter is. Sometimes the chest on that side is expanded, the ribs are a little elevated, and a fluctuation of a fluid can be perceived. When we are satisfied of the existence of matter in the cavity of the chest, it is almost always proper to discharge it by an opening. The safest and most convenient situation for making an opening into the chest, is between the sixth and seventh true ribs on either side, as circumstances may render necessary. If there be a collection of matter on both sides, the two operations should not be done at the same time. The operation consists in making an incision about two inches long, through the integuments which cover the space between the sixth and seventh ribs. The patient is to be so placed that the opening may be in a dependent position. The surgeon is to avoid the lower edge of the upper rib, as the intercostal artery lies in a groove running along that part. He is then cautiously to divide the layers of the intercostal muscles, till he brings the investing membrane of the lungs into view, which membrane is to be very carefully divided with a lancet. The instrument should never be introduced at all deeply, lest the lungs should be injured; and the size of the opening should never be larger than necessary. If requisite, a little tube may be introduced into the wound for facilitating the evacuation of the fluid. This tube should not be too long, and should have a broad rim to prevent it from slipping into the chest, and may be kept in its place with sticking plaster. It may be stopped with a cork if it should be thought convenient to let the matter run off at intervals.

EMPYREUMATIC. Having a burnt or singed smell or flavour. Oils or other matters which have been subjected to too strong a heat, are said to have an *empyreumatic* odour.

EMULSION signifies a composition in which oils and oily fluids, or other substances which are not soluble in water are suspended in watery fluids by means

of viscid substances, such as mucilages or syrups. The principal emulsions in use are the emulsion of sweet almonds, and of gum arabic, which are used to the quantity of half a pint pretty frequently in the course of a day, when there is heat of urine and strangury; either from disease, or from the introduction of cantharides, when applied to the skin for the purpose of blistering, or when they are given internally. Camphor is also given in the form of an emulsion, by means of almonds and sugar. Camphor emulsion is sold in the shops by that name, and is used in doses of a table-spoonful every three or four hours, in fevers of the kind approaching to typhus, or low nervous fever.

ENAMEL OF THE TEETH. The compact outer bony shell covering the teeth. It is liable to be incrusted with tartar in those who are not careful to keep their teeth clean. Strong acids are apt to injure the enamel, and dentists therefore discourage their use.

ENEMA. *See* CLYSTER.

ENTERITIS. *See* BOWELS, *Inflammation of.*

ENTROPION A turning in of the eyelids, by which the eyelashes are made to irritate the eye. *See* EYELIDS.

ENURESIS. Inability to retain the urine. *See* URINARY ORGANS, *Diseases of.*

EPHEMERA. A fever lasting only for a day, or a very short period. This term might be applied with great propriety to the febrile illnesses which so commonly affect children, on any slight derangement of the stomach and bowels, as they, in general, do not last longer than till the bowels are relieved by some laxative medicine.

EPIDEMIC. A disease affecting great numbers at once; thus we speak of an *epidemic* fever, and an *epidemic* catarrh or influenza; or we say that the measles or scarlet fever is the prevailing *epidemic.*

"Epidemics are very often owing to the effluvia of neighbouring marshes; and their occasional appearance is connected with the prevailing wind which passes from the marsh to the habitations. Another cause of their prevalence, is the wind from the marsh coinciding with the time when the moist ground begins to appear, from the water subsiding. This is the period of sickness; for the marsh, while covered with water, is innocuous. Another cause of epidemics is the weather. A long continued warm season, suddenly interrupted by a cold piercing wind, will produce a violent and extensive epidemic, which particularly attacks in the highest, and apparently the most healthy situations; for this reason, that the inhabitants are there most exposed to cold. But if this interchange of weather occurs to the inhabitants of a crowded city, the epidemic will be highly putrid, and often fatal. Should contagion of a malignant kind concur, the devastation of the epidemic will increase in proportion. These are the concurring causes of the American yellow fever, and the fatal epidemics in Spain, in 1804 and following years.

"There are, however, causes which we cannot investigate. Extensive epidemics appear, and travel in succession, with different severity, through every part of the globe that we are acquainted with. We often find these inexplicable epidemics without much danger, influencing the appearance of diseases, and their treatment. Thus, while some epidemics prevail, evacuations from the bowels are necessary in almost every complaint; even where, in appearance, unnecessary, or contra-indicated. In others, they are with difficulty borne in any disorder. This necessary attention to the prevalence of the constitution merits very particular attention.

"Epidemics connected with the seasons, or prevailing temperature, may be easily traced, and we shall find them occasionally mitigated or severe; sometimes apparently stopped, at others exerting their power with increased virulence. The peculiar treatment, however, suggested by a general epidemic, should not at once be discontinued. The human constitution does not soon change; the alte-

ration is gradual, and almost imperceptible; nor should the medical plans be altered, till they are decidedly injurious.

"When an epidemic has continued for some time, the body is habituated to the influence of the morbid cause, suffers less from it, and the health is more readily restored. At this time, remedies, before useless, are found to produce some salutary effects, and at the end of an epidemic we usually are told of a plan which never fails. On its return, these boasted plans are as ineffectual as before. In fact, they only combated with success a disease of reduced power." (Dr. PARR.)

EPIGLOTTIS. The cartilaginous lid which shuts up the entrance into the windpipe during the action of swallowing, so that, although the whole of our food passes over the tube which conveys air to the lungs, it is exceedingly rare for the smallest particle to go the wrong way, where it would be productive of great inconvenience and danger. This is so admirably contrived that the very act of swallowing shuts the epiglottis. A case mentioned in Cooper's Dictionary from Baron Larrey, shows how much we are benefited by this simple and beautiful mechanism. It is that of a French soldier, who had the epiglottis shot away at the battle of Alexandria, on the 21st of March, 1801. The ball entered at the angle of the jaw, crossed the throat obliquely, and came out at the opposite side of the neck. The base of the tongue was grazed, and the epiglottis shot away. The patient was not in much pain; but his voice was hoarse, feeble, and scarcely audible. When he first attempted to swallow, he was seized with a convulsive suffocating cough, attended with vomiting. Annoyed by thirst, which the extreme heat of the weather and the irritation of the wound excited, he incessantly repeated his attempts to drink; but always with the same result. Four days were passed in this deplorable condition. He already experienced violent complaints in his stomach; continued loss of sleep; he had a small quickened pulse, and was beginning to look thin. When Larrey saw him on the fifth day, the most urgent indication was to appease his hunger and thirst, which was done by introducing into the gullet an elastic gum tube; by means of which some drink was given to the patient, which relieved him much; and afterwards some rich broth. He was fed in this manner for six weeks, at the end of which time he was able, without the assistance of the tube, to swallow thick panado, and thickened rice, made into little balls. The powers of speech and deglutition in time became much more perfect, in consequence, probably, of the enlargement of the neighbouring cartilages; and of the expansion of the base of the tongue, having formed a sort of substitute for the epiglottis. This patient must have been starved to death, but for the use of the elastic gum tube.

EPILEPSY, CONVULSIONS, *or* FALLING-SICKNESS. A disease of frequent occurrence, and arising from many various causes, consisting of convulsions of more or fewer of the muscles of voluntary motion, accompanied with a loss of sense, and ending in a state resembling deep sleep. Epilepsy suddenly attacks persons seemingly in perfect health; and going off after a certain time, the patients are left in their usual state. In some patients, there is a very curious warning of the approach of an epileptic fit. From some point on the surface of the body, perhaps one of the fingers or toes, a sensation begins, as of a cold wind, or the creeping of an insect; which appears to proceed to the head, and when it reaches that part, the patient is convulsed. This is called the *aura epileptica*. In other cases, the patient fancies he sees a spectre approaching him, and the contact of this figure is the commencement of the convulsions. Whether there be any warning or not, a person thus attacked loses all power of sense and motion, and either falls or is thrown with convulsions to the ground. In that situation, violent convulsions variously move his limbs and the trunk of the body, and frequently

with more violence on one side than the other. In almost all cases, the muscles of the face and eyes are much affected, giving a very distressing and alarming distortion to the countenance. The tongue is often affected, and thrust out of the mouth; and by the convulsive action of the muscles which shut the jaw, the tongue is not unfrequently severely wounded, and has been known to be almost bitten through. During the continuance of the convulsions, as the patient has not the power of swallowing, the spittle issues from the mouth, worked into a frothy state by the action of respiration. This is always an unseemly appearance, though by itself it is not to be greatly regarded. The convulsions remit for a few minutes, and are then renewed, perhaps with increased violence. In a little time, the convulsions cease altogether, and the person is in a state of complete insensibility, which remains for a considerable time. Gradually he recovers his senses, but has no distinct remembrance of what has passed from the first attack of the paroxysm. The pulse and breathing are somewhat irregular and hurried during the fit, but soon return to their natural state.

Causes of EPILEPSY. In this, as in all nervous diseases, the explanation of causes is very difficult. The opposite causes of over-excitement and of debility are both known to produce epilepsy. Every thing that irritates the brain, or the mental faculties, which we, in our imperfect knowledge, believe to be dependent on the actions of the brain, has been known to produce epilepsy; thus an injury done to the skull, the growth of tumours in the internal parts of that cavity, splinters of bone scaling off in consequence of disease, and various alterations of structure which have been discovered after death in patients afflicted with epilepsy, give us just grounds for reckoning mechanical irritation among the causes of epilepsy. Violent emotions of the mind, as joy, fear, anger, are well known to produce epilepsy. Hence the propriety in all cases, of being very cautious in communicating intelligence likely to produce a strong impression; as even the most joyful tidings, suddenly and rashly imparted, have been known to produce convulsions, madness, or death. It is a singular fact, that the sight of a person in convulsions affects bystanders with similar symptoms; and medical men express the fact, though they cannot explain the cause, by ascribing it to the principle of *imitation;* by which great numbers of persons are affected in the same way as one begins to be, whether by enthusiasm, fear, rage, or the more corporeal affections of hysterics and epilepsy. Another cause which is referable to the brain, is over-fulness or determination of blood to that organ; of this we are convinced by the frequent occurrence of apoplexy and convulsions in the same person, and the interchange and alternation of these symptoms with each other. Acute pain in distant parts of the body as from a stone passing through the ureter, gives rise to epilepsy; and irritations of the bowels, by acrid matters lodging in them, by costiveness, or by worms, occasion convulsions, though no great uneasiness is felt in the bowels themselves. Children, when teething, are very frequently affected with convulsions, and also when their stomach and bowels are out of order. Many causes, the opposite of excitement, produce epilepsy. Thus, a person when weakened by a large bleeding, is sometimes seized with epilepsy; and debilitating causes, which in some produce fainting, in others cause convul sions. The depressing passion of terror sometimes produces epilepsy. Many o. the vegetable poisons produce convulsions before they prove fatal. In many instances, epilepsy seems somehow connected with the state of sleep. The causes above enumerated being often applied to the majority of mankind with impunity, there must be some reason why certain persons only are so affected by them; and the nearest approach to explanation that we can give, is that this tendency to convulsions exists in persons of a delicate and irritable habit, who are easily

susceptible of impressions on their nervous system; and hence it so frequently occurs in children, in young persons of both sexes, and in the natives of warm climates. Convulsions of the most violent kind not unfrequently attack women when pregnant. (*See* PREGNANCY.)

Diagnosis. The affections which epilepsy most resembles, are apoplexy, and hysteria. It resembles apoplexy in the suddenness of the attack, and sometimes in the preceding symptoms; but is distinguished by the want of the stertorous breathing, and of the slow and laborious pulse which occur in apoplexy. Epilepsy is distinguished from hysteria, by this last occurring chiefly in females, and being attended with much flatulence and other disorders of the bowels, and with variable and irregular emotions of the mind.

Prognosis. Epilepsy seldom destroys the life of the patient by a single fit; but it is a matter of much anxiety to judge whether the disease is likely to be cured, that is, to cease from recurring upon the patient. It is seldom cured when it is hereditary; and the longer it has been habitual, the less is the probability of a cure. In young persons subject to epilepsy, we hope that some of the great changes which take place in the constitution, the approach of puberty, the appearance of the monthly discharge, or the delivery of the first child, will operate a permanent cure; but if those events pass over without this favourable result, we are compelled to think badly of the case. Epilepsy which is owing to mental emotions, and especially to frights, is rarely cured.

Treatment of EPILEPSY. In epileptic patients, we have three very distinct indications to fulfil: to prevent a fit, to shorten its duration, and to hinder its recurrence; but unhappily our resources are very inadequate to our wishes. In cases where a fit is expected, we should endeavour to prevent its occurrence; and where any warning is given for some time previous, as by headach, flushing of the face, or ringing of the ears, in persons of a full habit, we are to employ evacuation of the bowels, or a bleeding either general or local, taking care to avoid all sources of irritation. In those persons in whom debility is evident, we follow a different plan, and give camphor, bark, chalybeates, or other tonics. In epileptic cases accompanied with the *aura*, it has been proposed to stop the fit by applying a tight ligature in some part of its course between the extremity and the head; and to effect a permanent cure by cutting the nerve across which is believed to transmit the nervous energy to the part; but neither of these plans have succeeded often enough to warrant our confidence in the practice.

Our *second* indication is to shorten the fit if possible. But however distressing to friends and bystanders may be the appearance of a person in a fit of epilepsy, it is not often that the most skilful attendant can do much to shorten its duration, or that friends can do more than take care, that the unhappy patient does not injure himself by the violence of the convulsions. A roll of silk, or some such soft substance, should be put into the mouth, to protect the tongue from being bitten; and the arms or legs are to be held with some degree of firmness, to prevent them from being dashed about with violence. The patient should be placed on a bed or couch, or have some soft things put under him; he should have the head and temples rubbed with vinegar, or some other cold application; and ammonia or other stimulants are to be applied to the nostrils. It is in general impossible to give any thing by the mouth; and the choice of any thing, when it can be swallowed, must be determined by the state of excitement or debility which appears to predominate. If there is great flushing of the face, heat of skin, and evident marks of great flow of blood to the head, it is quite proper to bleed, and even largely too, during the fit, which will probably be shortened by the practice; but if there is a feeble pulse, with

clammy sweats, and other marks of debility, it would be the height of imprudence to detract blood; and we should rather, if possible, restore the heat of the skin by gentle rubbing with warm dry flannel, and giving some cordial by the mouth. In the convulsions of children from teething, it is necessary, along with other remedies, to scarify the gums; and in many cases this should be done to prevent a fit from taking place.

Our *last* indication is, when a fit of epilepsy is over, to do what we can to prevent another. This is not always practicable, but it is to be attempted by correcting the system in general, and the nervous system in particular. If the person shows marks of fulness and determination to the head, we are to diminish these dangerous tendencies by purgative medicines, by a low diet, and by avoiding all occasional excess. An issue in the neck is a prudent measure. Few medicines can be trusted to, as having any power to prevent the return of epilepsy. Such as have had any reputation at all are some metallic preparations, and some strong smelling vegetable productions, as valerian, assafœtida, and other antispasmodics. It was the opinion of Dr. Fothergill, that the good effect apparent from the preparations of copper and some other metals used in epilepsy, was merely from their deranging the stomach in some degree, and thus preventing people from eating too much, by which the fulness of the system was diminished, and the irritability lessened, which brought on the fits of epilepsy. The ammoniuret of copper in the dose of half a grain twice a-day, increasing it gradually to three grains, or the oxide of zinc in the dose of from three to six grains, or the nitrate of silver in the dose of an eighth or a quarter of a grain, have been frequently used, but in too many cases without any great success. When there is reason to consider debility as the cause of epilepsy, such measures are to be adopted as strengthen the constitution; and for this purpose we employ bark, steel, and cold bathing, with regular exercise and attention to the stomach and bowels.

EPISPASTICS. A name for blistering and drawing ointments.

EPISTAXIS. The nosological name for bleeding at the nose. *See* Nose, *Bleeding from.*

EPSOM SALTS. One of the most useful of the purgative salts. It is composed of sulphuric acid combined with magnesia, and is procured by the evaporation of mineral waters, in which it is the chief ingredient, as those of Epsom in Surrey; and likewise by the evaporation of the bittern remaining after the extraction of salt from sea-water. It is one of those purges which are almost universally proper; and it has nearly superseded the use of Glauber's salt, as being less coarse and disagreeable. The dose for a grown up person is from one ounce to an ounce and a half, dissolved in half a pint of water, and drank lukewarm. The morning is the best time for taking saline purges. Epsom salt may also be given in the infusion of senna leaves; a quarter of an ounce being dissolved in four or six ounces of the infusion. The same mixture of increased strength may be given as a purgative glyster.

ERGOT OF RYE. An excrescence sometimes found on rye, *Secale cereale;* said to have powerfully poisonous effects, and occasionally used in labour and uterine complaints. *See* Rye.

ERRHINES are those substances which, when applied to the nose, stimulate the vessels opening on the fine membrane which lines that cavity, and occasion a discharge of serous or mucous matter from it. Various acrid vegetables, reduced to powder, have that effect; as asarabacca, white hellebore, and the most noted of them all, tobacco and snuff. These substances seem at times to relieve toothach and headach, by the discharge they occasion; and some have thought them useful in apoplexy and palsy; but the violent shock they give to the body and the delay of the blood in the brain which they occasion, have been known

to give rise to a fatal attack of the disease. When snuff has been long used, it ceases to excite any discharge from the nose, and therefore no ill consequences can ensue from its discontinuance, as there might, by stopping an habitual discharge; but if such discharge has become constitutional, it will be dangerous to check it suddenly, by abruptly laying aside the use of snuff.

ERUPTIONS. A general term for every appearance on the skin, different from its natural and healthy appearance. The variety of eruptions is very great, and it is only within a few years that any attempt has been made to classify and name them. The arrangement of Dr. Willan, and his pupil Dr. Bateman, is that which has been almost universally adopted. Eruptions are arranged in eight orders: Pimples, scales, rashes, blebs, pustules, vesicles, tubercles, spots. 1. PIMPLES, *papulæ*, have a very small and pointed elevation of the cuticle, with an inflamed base, very seldom containing a fluid, or suppurating; and commonly terminating in scurf. The principal eruptions of this first order are the red gum or tooth eruption, the lichen, and the prurigo, an eruption attended with severe itching. 2. SCALES, *squamæ*, layers of diseased skin, hard, thickened, and opaque. Scales, when they increase into irregular layers, are denominated crusts. Instances of scaly diseases are found in the leprosy, as described by the Greeks, not that kind mentioned in Scripture; the scaly tetter, the dandriff, and the fish-skin diseases. 3. RASHES, *exanthemata*, are superficial red patches, variously figured, and diffused irregularly over the body, leaving interstices of a natural colour, and terminating in a scaling off of the outer skin. Several very important diseases are included in this order, as measles, scarlet-fever, nettle-rash, rose-rash, purple specks and patches; erythema, or continuous redness of some portion of the skin, attended with disorder of the constitution, but not contagious. 4. BLEBS, *bullæ*, large portions of the outer skin detached from the true skin by the interposition of a transparent watery fluid. Blebs occur in erysipelas, commonly called the rose, and in some other febrile affections; they also occur suddenly in some patients without any fever. 5. PUSTULES, *pustulæ*, are elevations of the cuticle, with an inflamed base, containing pus or thick yellow matter. The small-pox is a pustular disease; and so is the itch, in its various forms, rank, watery, and pocky. The pus is formed in the progress of the above diseases, but at the commencement, the fluid in the eruption is clear. Other instances of pustular disease are to be found in the running tetter, ringworm of the scalp, scalled head, milk-blotches, &c. 6. VESICULAR ERUPTIONS, *vesiculæ*, are such as have a small round elevation of the skin, containing lymph, which is sometimes clear and colourless, but often opaque and whitish, or pearl-coloured. It is succeeded either by scurf, or by a scab formed of different layers. In this order are placed the cow-pox, the chicken-pox, and the variety of eruptions seen in those whose constitutions have been modified by the occurrence of small-pox or vaccination, when they have been exposed to small-pox contagion. Shingles, miliary eruption, herpes of the lips, heat-spots, and the thrush, are vesicular diseases. 7. TUBERCLES, *tubercula*, as applied to skin diseases, signify small, hard, superficial tumours, circumscribed and permanent, or suppurating partially. Boils and warts are tubercular eruptions; and there are several others which have no English names, such as those which for a succession of months or years infest the faces of young persons, and which have a black spot in the middle, vulgarly supposed to be the extremity of a worm. The knotted and enlarged nose is a tubercular affection. 8. SPOTS, *maculæ*, signify a permanent discolouration of some portion of the skin, often with a change of its texture. This order includes freckles, moles, flesh-marks, mother-spots; and the various marks which are thought to resemble grapes, strawberries, &c. It is vulgarly supposed

that these last are owing to the imagination or longings of the mother; but this is altogether contradictory to every principle of physiology, and to all correct sober observation. Such fruit-like appearances get brighter in the spring and summer, not in sympathy with the ripening fruit, but in consequence of the heat of the weather increasing the determination of the blood to the surface. Moles should not be meddled with, as no advantage is gained by any kind of treatment, and when suppuration is induced on them, it is tedious and painful. We cannot recommend any cosmetics for the removal of freckles.

On looking back to the foregoing list of affections of the skin, it will be seen that many diseases of very different kinds and degrees of danger are included under the title of Eruptions, from the slight freckle or transient tooth-rash, to the deadly erysipelas or malignant small-pox. Some of them are attended with febrile symptoms, while others are entirely free from them; some depend on disorders of the stomach, while others are the effects of a complete corruption of the fluids of the body. The diseases which are ushered in by feverish and other constitutional symptoms, and in whose progress, sometimes pretty long, eruptions appear on the skin, are of very great importance; as under this class, called by physicians exanthematous diseases, are included those affections which generally attack persons only once in their lives, small-pox and chicken-pox, measles, and scarlet fever; though it is somewhat doubtful whether this last does not attack more than once. *See* ERUPTIVE DISEASES.

ERUPTIVE DISEASES, termed by Dr. Cullen and former nosologists *Exanthemata*, signify those contagious affections which attack persons only once in their lives, which begin with fever, and which at a precise period of their course are accompanied by small inflammatory eruptions on various parts of the skin. Of such diseases, small-pox, chicken-pox, and measles, are the best marked and most perfect specimens. Along with these, there are classed under the exanthemata, other diseases to which the above characters do not so well apply. Scarlet fever is an eruptive disease, but the period of the eruption is not so distinctly marked as in the former three, nor is it so certain that it affects a person only once in his life. The plague, on account of its contagious nature, and the breaking out of buboes and carbuncles, has also been called an eruptive disease; but it is better classed with the malignant fevers. The miliary eruption is to be considered merely as the consequence of profuse sweating, and of a heating regimen, and by no means as an original disease. *See* SMALL-POX, MEASLES, &c.

ERYSIPELAS, THE ROSE, *or* ST. ANTONY'S FIRE. *See* ROSE.

ESCHAR. A hard crust or scab upon the flesh, occasioned by the application of heated metal, or corrosive substances. It also signifies a slough formed on a wound or ulcer. When an issue is to be made in any part of the body, the first step is to destroy the life of a portion of the skin by applying some acrid substance; this mortified portion is the eschar, which in time is detached from the parts below, and leaves them in a state of ulceration, from which a discharge can be kept up by proper dressings.

ESCHAROTICS. Substances used to destroy any portion of the body by the formation of a slough or eschar, or to keep down rising flesh or diseased parts. Though the contact of heated metals has this effect, the term escharotics is more generally applied to caustic or corrosive substances, the chief of which are the nitrate of silver (lunar caustic): and caustic potash, either alone or combined with lime; blue vitriol, red precipitate of mercury, and burnt alum. The mineral acids are escharotics, but are less used on account of their fluidity. Escharotics are sometimes used to open abscesses, when there is great dread of a cutting instrument; but it is in general by far the best way to open them by the knife or

lancet. The greatest inconvenience in the application of escharotics is their tendency to spread beyond the part which we wish to be acted upon. The most usual way of preventing this, is to protect the neighbouring parts by leather or adhesive plaster.

ESSENCE. Certain volatile and fragrant matters which rise in distillation, and either yield a volatile oil or impregnate water with their peculiar flavour, popularly go by the name of *Essences*.

ESSENCE OF MUSTARD. A composition much famed for the cure of rheumatism, sprains, &c. which is chiefly composed of oil of turpentine, camphor, and a portion of spirit of rosemary, to which is added a small quantity of the flour of mustard.

ETHER. *See* ÆTHER.

EXACERBATION. The increase of the severity of any disease; thus we say of certain fevers, that they have an *exacerbation* towards evening.

EXCITEMENT signifies that state of the body in which the actions, especially of the circulating and nervous systems, are increased. Thus, all feverish diseases are considered as diseases of *excitement*.

EXCITING CAUSE. The circumstance immediately preceding an attack of disease. Thus, if a person, from a full habit of body or tendency of blood to the head, is disposed to apoplexy, a full meal or a walk on rising ground often brings on the fit, or proves the *exciting cause* of that disease.

EXCORIATION. A loss of the cuticle or scarf skin. Excoriation or chafing of the skin is very liable to happen, especially in infants, at those places of the skin that are often in contact with each other, as the ears, neck, arm-pits, and groins. The best way to prevent this tendency, is to dust the parts with prepared tutty or chalk finely powdered. If there be a discharge of matter from the excoriated parts, great care and attention are requisite in the healing of them. If the running has continued long, there is some danger in checking it too suddenly; but if proper precautions are taken to prevent this, and to relieve the system by purging, there is no reason why they should not be healed up quickly, as there is always risk of the inflammation spreading to some internal part. When chafing appears worse than can be checked by the tutty, a wash of white vitriol is to be used; eight grains of the vitriol to four ounces of rose water. If this does not prevent the excoriations, the parts are to be washed pretty frequently with some weak stimulant lotion, as brandy and water, and they are to be covered with brown cerate or spermaceti ointment, or a liniment made of equal parts of olive or linseed oil and lime-water.

EXCREMENT. Whatever is destined to be discharged out of the body. *See* STOOLS.

EXERCISE. The necessity of exercise to the health and comfort of the animal body, is demonstrated by the instinctive desire for it which appears both in man and in the lower animals; as also by the pernicious and lamentable consequences of sedentary habits and a life of indolence. Even from the moment of birth some exercise is necessary, and this is supplied to the infant by the washing and dressing to which it is subjected; and its vigorous crying, when we are sure it is not from the feeling of pain, is to be regarded as a salutary mode of dilating its chest, and of putting many muscles into action. In the progress of its days, the dandling of the nurse, and then its own exertions, succeeded by the active play of the schoolboy, conduce, by the motion given to the limbs, to the digestion of the food, the circulation of the fluids, and to the growth and health of the body; while the bad effects of the want of exercise are seen in the ill health of the imprudent student, the plodding merchant, and the indolent and luxurious man of wealth. As exercise is of the most essential use in preserving the health, so it is a very important agent in the cure of disease. The disorders of digestion receive most decided benefit from exercise.

The feeble constitution which scrofula attacks, is invigorated by exercise, and enabled to resist that very prevailing malady. Even hereditary gout may be mitigated or kept off, if the subject of it has fortitude to resist the blandishments of luxury and indolence. The modes of exercise are various, and, in the case of disease, a choice is necessary. That exercise is the best which employs the greatest number of muscles; and as the most useful objects are, by the kindness of Providence, the most easily attained, so walking, which is the best of all exercises, is in the power of all. Walking, in a degree proportioned to the strength of those who employ it, is useful in the cure of various diseases, as in those of the stomach, in gout, and some others; but there are other complaints in which it is unsafe, as in inflammatory affections, and in those where there is a tendency of blood to the lungs. It is therefore a hazardous plan to drive away a cold by walking it off; instances have been known where violent inflammation of the lungs has been brought on by such an attempt. All the more violent exercises, as fencing, dancing, running, wrestling, and the like, are to be avoided in diseases of excitement; and in those of debility, exercise is to be prescribed at first with the greatest caution, and to be taken very gradually; and thus, by prudence and perseverance, very feeble persons have become able to take exercise of the most active kind. When a patient for whom exercise is good, is unable to take it by his own exertions, we must direct some mode of gestation, as riding on horseback, or in a carriage, sailing, or swinging on an elastic board. Riding on horseback has been much celebrated in consumptive diseases; and provided it be taken in fine weather, and before the disease has advanced too far, it will assist the other means of attempting to arrest its progress; but we must not expect from it the great and signal benefit which Sydenham ascribed to it. Sailing also has been much famed as a remedy in consumption, and though it has failed in numberless instances, it is worth a trial. The sea-air appears to be beneficial, and the sickness and vomiting which accompany a voyage, have the effect of improving, in many cases, the action of the stomach and bowels, in removing tumours, and stopping discharges of blood. Riding is to be avoided in diseases of the kidneys, as it is apt to occasion much pain and a discharge of blood. Riding in a carriage is an exercise of body and mind, well adapted for a variety of chronic ailments, stomach complaints, and low spirits. The exercise is good, and the change of scene prevents the patient from brooding over his real or fancied maladies. Exercise should generally be taken in the best and purest air; and a moderate degree of cold, provided it be not attended with moisture, adds to the strengthening effects of exercise. In some cases of disease, neither exercise nor gestation are in the patient's power, and we must substitute for them rubbing with the flesh-brush, or with the hand. Such treatment is sometimes necessary in rheumatism, sprains, tumours, white swelling, and dropsical limbs.

EXFOLIATION signifies the separation of a dead piece of bone from the living. One part of a bone is never separated from another by the rotting of the dead part, for that which comes away is as sound as it ever was. Exfoliation takes place soonest in bones which have the fewest cells, and whose texture is the closest. Before any part of a bone can be thrown off by exfoliation, it must be dead. But even then, till the process of exfoliation begins, the bone adheres as strongly as ever, and would remain for years before it could be separated by putrefaction alone. A dead bone acts on the system in the same manner as any extraneous body. It stimulates the adjacent living parts, in consequence of which such a process is begun, as must terminate in its being thrown off. Neither caustics, nor the actual cautery hasten exfoliation; they only produce death in a part of the bone, which is the first step to-

wards exfoliation. Exfoliation is not a necessary consequence of a bone being laid bare, and being deprived of its investing membrane. If the bone be in other respects healthy, it may heal without the smallest exfoliation being thrown off, especially in young subjects. But if caustic or stimulating applications be made use of, the circulation in the surface of the bone will be disturbed and destroyed, and that part will be separated and cast off by the process of exfoliation. The best mode of attempting to prevent an exfoliation from occurring at all on a bone that has been exposed by a wound, is to cover the part again, as soon as possible, with the flesh which has been detached. When the exposed bone cannot be covered, it should be dressed with the mildest and simplest applications, with plain lint, or lint spread with spermaceti ointment. (Mr. JOHN HUNTER.)

EXPECTORANTS. Those medicines which have the power of promoting the discharge of mucus from the lungs. They are of great service in many diseases of the chest. The greater number of expectorant medicines are those which in larger doses prove emetic, viz. squill, ipecacuan, ammoniacum, and antimony. Besides those medicines which are more commonly called expectorants, there are various other remedies which indirectly have the same effect in another way. Thus bleeding, blistering, and nauseating doses of emetics have the effect of promoting expectoration; and some substances, by stimulating the top of the wind-pipe, act as expectorants; hence the benefit derived from stimulating lozenges, jellies slowly dissolved in the mouth, and the inhaling the steam of hot vinegar or other stimulant vapours. When the mucus is scanty and acrid, mucilaginous and demulcent substances prove good expectorants. Gum arabic, liquorice, or honey dissolved in water, linseed tea, thin starch, barley-water, gruel, or oily emulsions, are useful on such occasions.

The most useful of expectorant drugs is the squill or root of the sea-onion, either in powder, or infused in vinegar, or given in the form of tincture. The powder of squill is combined with ammoniacum in the squill pill of the Edinburgh pharmacopœia; and this is a very good way of exhibiting it. Two pills at night and one in the morning, or one pill four times a-day may be taken, or half a tea-spoonful of the vinegar of squill in a little syrup, twice a-day; or an ounce of the vinegar, of squill, with three or four of mucilage, and two of some aromatic water, may be made into a mixture, and of this a table-spoonful is to be taken three or four times a-day. Squill may be combined with calomel, to promote its expectorant effects; half a grain of calomel may be added to each grain of squill. Ipecacuan, in doses of three or four grains, proves expectorant.

Emetics, even in full doses, have been given with the view of promoting expectoration; and it is probable that, in hooping cough, they not only enable the stomach to get rid of the mucus which has been swallowed, but also promote the discharge from the lungs. We may here mention, that in diseases of the chest, it is an unfavourable symptom when emetics do not empty the stomach.

Some old people are troubled with a habitual cough and expectoration, which they are very anxious to get rid of; but it is not advisable to stop this discharge suddenly, especially by opiates, as it too often happens that derangement of the bowels, or headach, or some more alarming symptom, attacks old people when their cough and spitting are much checked The sulphate of zinc, in the quantity of one grain twice a-day, and in the form of lozenge, is a medicine that may be given with more safety, to check the excessive expectoration of old people.

EXPECTORATION. The discharge of mucus, pus, or other matters from the lungs; a symptom of catarrh, asthma, and various other disorders of the chest.

EXTIRPATION. The removal of a part by a surgical operation, when no portion is left behind; as the *extirpation* of the eye, or of the female breast.

EXTRACT. The name given to substances procured by dissolving certain parts of vegetables or animals, and evaporating the fluid which has dissolved them. In this way, dissolving the root, leaves, bark, or whatever part of the plant contains the active principles, we obtain the extract of bark, of gentian, of colocynth, and a great variety of others.

EXTRACTION. The removing from the body any part or substance fixed in it; as the *extraction* of a tooth, of a bullet or other foreign body, or of the lens and its capsule, for the cure of cataract.

EYE. The globe of the eye is composed of various coats and humours. Without entering into minute anatomical details, we may mention the following as the principal parts of the eye. 1. A strong membranous coat called the *sclerotic coat*, forms the outer covering or circumference of the globe of the eye. At the anterior part it is transparent, to admit the rays of light, and the clear part projects a little forward from the rest of the globe. 2. The *choroid coat*, a dark coloured delicate membrane, which does not come farther forward than the posterior half of the sphere. 3. The inner coat is called the *retina*, and is formed by the expansion of the optic nerve, which, entering at the back part as a thick nervous cord, spreads out into a soft pulpy greenish cup, forming about half of the shell of the eye. By the various refracting powers of the humours, an image or picture of visible objects is formed at the back part of the eye upon this retina; and the distinctness of this picture is essential to accurate vision. Behind the clear part in front, is seen the coloured circle or *iris*, which, from its different colours, gives the distinctive appellations of black, blue, grey, hazel, &c. to the eyes; and this is perforated in the middle by a circular hole, called the *pupil*. The iris has the power of contracting its dimensions all round, and so making the pupil larger or smaller. When too much light is thrown upon the eye, the pupil becomes smaller, to exclude the superfluity of it; and the reverse when the light is scanty. If the anterior part be not clear, if the humours do not refract properly, if the retina be insensible; in all these cases vision is more or less impaired. The humours are, the *watery humour*, which, in small quantity, is situated at the fore part of the eye. Close to it is the *crystalline* lens, and the rest of the globe is composed of the *vitreous humour*, which is by far the largest of the whole, and composed of a clear liquor contained in cells. Referring to books of anatomy, optics, and natural theology for the exact description of this wonderful organ, for the mathematical principles of its construction, and the admirable and beneficent adaptation of it to every purpose of beauty and utility which man can desire, we proceed to mention the symptoms, causes, and treatment of some of the diseases to which this delicate and complicated structure is liable.

Principal Diseases of the EYE.

I. INFLAMMATION *or* OPHTHALMIA. All the parts and appendages of the eye are subject to inflammation, a disease not only attended with present pain and inconvenience, but which may lay the foundation of such derangements of the structure as will lead to the irreparable injury of vision. Of the various modifications of this affection, and of the method of cure, we shall now treat. To save circumlocution, we shall employ the term ophthalmia or ophthalmy, to signify inflammation of the eye. Ophthalmia is divided into the acute and chronic; and it is of consequence to make this distinction, as they require different treatment.

Acute Ophthalmy is characterised by the whole or part of the white of the eye being covered with blood-vessels, being what is commonly called *blood-shot;* the lining of the eye-lids participates in the same appearance, there is a sensation of great heat, uneasiness and shooting pains, and as if sand or dirt had got into the eyes. The presence of light is intolerable; the patient instinctively keeps the eye-lids closed. There is a very co-

pious flow of tears. Sometimes the constitution is a little affected, and the patient has feverish symptoms; but this rarely happens, unless he is very irritable, or the disease is very violent.

Causes of Ophthalmia. Exposure to cold piercing winds, or sudden changes of temperature, a blow upon or near the eye-ball, smoke or irritating vapours, dust, sand, or moats getting into the eye, exposure to light, very bright or long continued, looking much at small objects, reading by candle-light, and spontaneous determinations of blood to the head, or that excitement which arises from habitual drunkenness.

Cure. It is proper in all cases of ophthalmia, to be very sure that there is no foreign body irritating the eye; and to examine the eye for this purpose, is the first thing the surgeon ought to do. He is to take blood from the arm if there is much fever present; or if the inflammation appears more local, a number of leeches are to be applied in the neighbourhood of the eye, or the temporal artery is to be opened. The eyes are to be frequently bathed with tepid milk and water; and the bowels are to be opened by saline purgatives. A blister behind the ear, or on the nape of the neck, is a very excellent remedy in ophthalmy. If the inflammation be not very obstinate, and if there be no peculiar irritability of constitution, these measures will commonly put an end to the acute state of ophthalmy in a few days; at the end of which time, the pain and intolerance of light, the watery discharge, and other uneasy symptoms are abated, though the eye still looks red and inflamed. The ophthalmy has now passed into the chronic stage, and the bathing with warm water must be now exchanged for applications of an astringent nature, and such as are fitted to strengthen the parts. A useful application of this kind, is a solution of twelve grains of sulphate of zinc or white vitriol in three ounces of rose water and three ounces of spring water; the eye is to be frequently washed with this, taking care that a portion of the wash gets inside.

Though ophthalmia may appear a complaint very easily managed, we are too often completely baffled, and the patient suffers a very long time. In this chronic stage, we have not only inflammation and redness of the ball of the eye, but a raw and inflamed state of the eye-lids. This chronic ailment is very often the accompaniment of an unhealthy constitution, and general as well as local remedies are to be applied. An ointment composed of five grains of red precipitate to one drachm of fine lard, very intimately mixed, is to be put at the inner corner of the eye, particularly at bed-time, that the motion of the lid may diffuse it over the ball. Such cases are peculiarly apt to be aggravated by exposure to cold or any irregularity. Bark and wine, and nourishing diet, are to be given to strengthen the constitution.

There is a kind of ophthalmy in which the severity of the symptoms is very great indeed, where light is absolutely intolerable, where there is the feeling of great tightness in the ball of the eye, and severe pains in the head. Such severity of symptoms demands the most active and prompt employment of the means for reducing inflammation. Large general bleedings are to be directed, with active purges, and scarifications from the inner surface of the eye-lids, and even cutting across the distended vessels of the ball itself. Blisters are in this case also of service, and emetics are thought to have much efficacy in diminishing inflammation of the eye. The dropping into the eye of the vinous tincture of opium, is here also strongly recommended, but it seems principally useful when the violent acute stage is over.

Chronic Ophthalmia. In some constitutions, particularly the scrofulous, there is a continual redness of the eye-lids, and frequent tendency to inflammation of the eye itself. In this case, we are to endeavour to strengthen the system by bark and wine and generous diet, to avoid ex-

posure to damp and cold, to use an ointment at bed-time composed of the nitrate or the red precipitate of mercury; and when by any accidental cause it is changed into the acute, we are to resort to bleeding and the other remedies already mentioned.

Purulent Ophthalmia. There is a species of ophthalmy which has been termed the purulent ophthalmy, which occurs very frequently in very young infants; and, if not treated with the utmost skill and care, is apt to end in a projecting and untransparent state of the cornea, producing total blindness. There is a very remarkable and abundant discharge of thick yellow matter from the eye-lids, the lining membrane of which appears wrinkled, and presents a soft red surface. Should the surgeon be called in early enough, he must direct blood to be taken from the neighbourhood of the eye by leeches, must use an astringent wash, which he is to apply himself with a syringe, previously washing out the collected thick matter by the same instrument, filled with tepid water. This operation should not be trusted to the attendants, as the disease is so rapid and malignant that the unfortunate little patient runs the risk of total blindness, from the cornea becoming quite opaque. This treatment, when diligently put in practice, generally succeeds; the matter diminishes in quantity, and the eye-lids put on a more natural and healthy appearance. We then gradually discontinue our washing, taking care not to expose the eyes too soon to a strong light. This kind of ophthalmia is what the common people mean when they say the *gum* has got into the eyes.

Egyptian Ophthalmia. Another kind of ophthalmia with which we have become acquainted of late years, is the Egyptian ophthalmia, which is remarkable for its being of a contagious nature; many examples having occurred of its spreading in ships, regiments, and other assemblages of persons. It varies in its continuance and severity, from the acute but rapid kind, which is over in forty-eight hours, to the long protracted kind, which, after harassing the patient for years, leaves him in total blindness. The treatment does not differ from that of the other kinds already mentioned. Tepid washes at first, astringent ones afterwards, and local or general bleeding, when the fever is high, with the proper ointments and washes, and scarifications according to the judgment of the surgeon, constitute the practice in the Egyptian ophthalmia.

II. Iritis. Inflammation of the deep-seated parts of the eye, and especially of the iris, has had the name of *iritis* given to it. This inflammation is accompanied with violent pain, intolerance of light, headach, and all the more violent symptoms of ophthalmia. "It appears," (says Mr. Travers,) "in company with rheumatism of the chronic form, sometimes with the gout; with the constitutional signs of syphilis, and during or following the action of mercury upon the system." The conjoined operation of mercury and syphilis is one of the most frequent causes of iritis; but it occurs in persons who have not been using mercury, and who are free from all syphilitic taint.

Treatment. Besides the usual methods of diminishing inflammation of the eye by bleeding, general and partial, and the other parts of the antiphlogistic plan; and at the proper period dropping into the eye a little of the wine of opium, the best way of arresting the inflammation is, rapidly to saturate the system to full salivation by the use of mercury. This is to be done by giving from four to six grains of calomel daily, two grains at a time, combining it with half a grain of opium, to prevent its going off by the bowels; friction with mercurial ointment is to be diligently employed at the same time. It will appear strange, that the same agent which frequently contributes to the production of the disease should also be the most certain and effectual means of cure; but of the fact there can be no question; and British surgeons are highly indebted

to Dr. Farre for this most important improvement in the treatment of ophthalmic inflammation. " Mr. Saunders of London, in 1805, was accidentally led to the employment of mercury in one case and with success; but as he considered the patient to be syphilitic, mercury does not seem to have been used by him in his subsequent cases. The use of mercury in idiopathic, as well as in syphilitic iritis, was first in this country recommended by Dr. Farre, in the second edition of Dr. Saunders's Treatise, of which he was the editor. But while we acknowledge our obligations to Dr. Farre, we must perform an act of justice to the oculists of Vienna, who certainly anticipated us in this improvement. In 1800, Professor Bëer of Vienna, in a tract entitled " Selections from the Journal of a Practical Oculist," speaks in very decided terms of the use of mercury in various inflammations of the eye, unconnected with syphilis. In phlegmon of the eye, that dreadful inflammation, which, when not corrected in time, with the most violent intolerable pain, converts the whole eye into pus, so that only a small shapeless lump remains in the orbit, I know no remedy which so quickly and certainly checks the suppuration as mercurial friction. Even when fever is present, this active remedy can be used without any fear, according to my experience. When, in these ophthalmias which follow small-pox, an abscess or staphyloma begins to form on the cornea, the friction with mercurial ointment is so sure a remedy, that with certainty, opacity or destruction of the cornea will very rarely occur." (*Edinburgh Medical Journal,* Nov. 1818.)

III. Cataract, a species of blindness, arising from an opacity of the crystalline lens or of its capsule, the effect of which is to prevent the rays of light from passing through the different coats and humours of the eye, to form an image on the retina, which circumstance is necessary for perfect vision. The cataract appears as a spot or speck on the pupil of the eye, sometimes occupying the whole, sometimes only a part of it. It is commonly of a grey or whitish colour, sometimes of a very pure white. The disease at first shows itself by a weakness or imperfection of the sight, and it almost always terminates in the total loss of that sense. While the disorder is in progress, the patient sees better in a moderate light than in a strong one, as the greater expansion of the pupil allows a few rays of light to enter. A mist seems to cover objects, and to confuse small ones. This affection often comes on without any assignable cause; and some imperfection of vision is perceptible by the patient himself, before any thing wrong is visible to another person. Without repeating the general description of the eye in this place, we shall satisfy ourselves with stating, that the lens is a round crystalline body, clear and viscid, and contained in a little case or capsule, and cataract is produced by a thickening or dimness either of the containing membrane or of the lens itself. When the contents are hard and solid, it is called a hard cataract, when fluid and milky, a fluid cataract, and when the contents are like a jelly, or curd, it is called caseous or cheese-like.

Causes of Cataract. It is believed to occur most frequently to persons who are much exposed to strong fires, as glass-workers and blacksmiths. Cataract rarely appears before the age of forty, but children are sometimes affected by it, and some are even born with it. In general, cataract arises spontaneously, and no cause can be assigned for it. Sometimes it arises from external violence, from blows on the eye or neighbouring parts, and these cases are in general more likely to get well than those which begin without any evident cause.

Treatment. No cure is to be expected till the obstruction to the passage of the rays of light is removed. This is the purpose to be effected, and the means are either constitutional remedies, and external applications, or the removal of the opaque body from the sphere of vision by an operation.

General or local means of removing Cataract. Various remedies have been recommended, of which the principal are bleeding, cupping, and scarifying, as also issues, setons, and blisters. The juices of some plants have also been in vogue. Cataracts from external violence have sometimes dispersed spontaneously; and in other cases a blow on the eye has been followed by the sudden disappearance of cataracts. Mr. Ware prefers to other remedies the application to the eye itself of one or two drops of ether, and the occasional rubbing of the eye over the lid with the point of the finger, first moistened with a weak volatile or mercurial liniment.

Of the Operation, and in what cases it is to be recommended. The best oculists place very little reliance on any of the above means in a fully formed cataract; and consider the only successful method of removing the opaque lens or capsule to be by an operation. But there are certain cases in which the completest removal of the obstruction would not restore sight, and in which, therefore, it would be improper to have recourse to an operation. The retina, the expansion of the optic nerve, may be quite insensible, and, of course, the freest passage for the rays of light would contribute nothing to the restoration of vision. We have reason to fear this insensible state of the retina when there has been a long continued inflammation of the eye, peculiarly affecting the inner parts of it, when there has been headach, with great pain of the eye and eye-brow, and when the patient is quite unable to distinguish a bright light from total darkness. In such cases the removal of the cataract would be of no service, and the operation is unadvisable. The operation is not to be hastily advised in cases of cataract arising from external violence, as these often disappear spontaneously; and some general and internal remedies may be employed, as blood-letting and mercurials. Some have advised that there should be no operation, where only one eye is affected with cataract, on the ground that one eye is sufficient for the purposes of life, and that there is a danger of the sight being imperfect from the two eyes not performing their functions correctly alike. This last objection is disproved by numerous cases where the vision was perfect, when one of the eyes had been operated upon; and the first might be a good reason for letting the cataract alone, were we certain that the other eye would keep well; but, from the wonderful sympathy between the two eyes, there is reason to fear that some morbid action may take place in the other; whereas it is not uncommon for a diseased action to be checked in one eye, where the operation for cataract has been performed in the other. When there is a cataract on both eyes, it is not advantageous to operate on one immediately after the other, as the inflammation excited even by the operation on one eye is apt to be too great both in the eye operated upon, and also to cause inflammation in the other by sympathy; and an operation performed nearly at the same time on both eyes is likely to increase manifold the chance of hurtful excitement. It is a question of considerable importance, whether it is proper to operate for a cataract on children of a very early age, that is, before they have discretion to understand the propriety of an operation, and firmness to submit to it. There are many arguments conclusive of the propriety of an early operation, as arising both from the nature of cataract, and from the important collateral questions connected with the subject. Children must be subjected to many restraints, and must have many things done to them very disagreeable to their feelings, and even inflicting much present pain; but when we consider that the purpose of the operation is to give the exercise of a sense so necessary both for enjoyment and education, it must at once appear a cruel conduct, to deprive them of the use of it for so many of the early years of life. All that is required is to keep the little patient's body, and especially the eye, steady. Besides, in the lapse of years, there is no

knowing what untoward circumstances may take place in the cataract; it may contract adhesions to the neighbouring parts, and so be difficult or impossible to be removed by any operation whatever. The state of the cataract in infants is generally more favourable for an operation than at any future period. The cataract is generally fluid, and requires merely the free rupture of the capsule; and this capsule, though opaque, is tender, and easily removed; and the milky fluid is soon removed by absorption. If the cataract should be soft, it is commonly of that pulpy softness that is easily dissolved by the aqueous humour after the capsule has been lacerated. Even if the cataract should be hard, it is as easily depressed as in an adult. Mr. Gibson, of Manchester, who strongly urges the propriety of couching, even in very young subjects, thinks that even if a surgeon had difficulties to encounter which do not occur in adults, the invaluable benefit conferred by enabling an infant to become an intelligent being, like other children, instead of remaining in a state approaching to idiotism, would incline him to run some risk of failure, and to make more than common exertion, especially as there is little chance of injuring the eye when proper precautions are used. As additional arguments for couching infants, it has been urged, that in all probability the eye when long allowed to lie passive, without any exercise of its powers, is apt to lose them, so that the patient is little benefited by an operation; and also, that the eye of those born blind is apt to acquire a restless and rolling motion, and the patient loses all controul over it. It is not thought advisable to use any instrument for fixing the eye, as the pressure occasioned by all such contrivances is apt to cause a sudden protrusion and loss of what is called the vitreous humour of the eye. When the patient is to undergo the operation, he should be seated in a low chair, before a light, but not too bright a one, as this makes the pupil to contract too much. The sound eye is to be covered with a compress, and an assistant placed behind must hold the patient's head, and support it on his breast. With the finger of the hand that is free, the assistant must gently press the eye-lid against the upper part of the orbit, carefully avoiding all pressure on the eye.

Mode of Operating. 1. *Extraction.* This consists in removing the opaque lens and its capsule from the eye, by an opening at the lower part of the cornea, or clear prominence in front. In a popular work like this, as it would be out of place to give minute directions for the shape of the instruments, and the method of performing this very delicate operation, we shall refer to books of surgery for these particulars, and we shall only give a very general sketch of the manner of accomplishing the great purpose of removing the opaque body from the axis of vision. A knife, not unlike a common lancet, is the instrument used by the most expert oculists. The operator is to be seated in a chair, a little higher than that of the patient, whose head is to be placed obliquely at a window, so that the eye to be operated upon may be in clined towards the outer angle of the or bit. The eye being properly fixed by the fingers of the operator and his assistant, the point of the knife is to enter the outside of the cornea, a little above its transverse diameter, and just before its connexion with the sclerotica. Thus introduced, it is to be pushed on slowly but steadily, without the least intermission, and in a straight direction, with its blade parallel to the iris, so as to pierce the cornea towards the inner angle of the eye on the opposite side to that which it first entered, and till about one-third is seen to emerge beyond the inner margin of the cornea. The aqueous humour now escapes, and the cornea is rendered flaccid. The edge of the blade is to be pressed slowly downwards, till it has cut its way out, and separated somewhat more than half the cornea from the sclerotica. After the knife has pierced through the cornea, and while it is cutting its way downward,

the assistant, to whose care the upper eye-lid is entrusted, is gradually to let it drop, in order to prevent the lens from escaping too hastily. The operator having opened the capsule, is to make gentle pressure on the upper part of the globe of the eye, to promote the expulsion of the lens. It is advisable, after the operation, gently to rub the anterior part of the cornea over the lids, to remove from the centre of the pupil any small fragments of opaque matter. After the operation, the patient should lie continually on his back, in order to prevent as much as possible the escape of the humours. A dossil of lint, steeped in plain water, or brandy and water, and covered with cerate, is the most convenient dressing. Care must be taken not to suffer the bandages for retaining this dressing to press too much on the eye, for fear of exciting inflammation, or forcing out some of the vitreous humour; and, on the other hand, it must be tight enough to prevent its slipping off, and irritating the eye by unequal and injurious pressure. This should not only be avoided from the bandage, but from any foreign substance whatever; and we are particularly to guard against any irritation from the edge of the lower eye-lid coming between the sides of the divided cornea; from the edge of the lower lid being turned inwards, and so fretting the eye with its eye-lashes, or from any detached eye-lash getting upon the globe of the eye. We must be particularly careful not to expose the eye too soon to a strong light. For two or three days we must not open the eye-lids, as the light may increase the tendency to inflammation; and the violence may disturb the wound in the cornea, before it is properly healed. The best treatment is to keep the patient wholly in bed, and to direct him to move his head as little as possible during the first three days after the operation. During this time the wet lint and plaster, as formerly described, is to be kept on the eye. The dressing to be renewed once a-day, and the outside of the eye-lids to be washed once a-day with tepid or cold water, according to the season. Abstinence from heating and stimulating food and drink is to be enjoined, and no exertion of mind or much talking is to be allowed. About the fourth day, he may be allowed to sit up a little, and, if necessary, a laxative medicine should be ordered. About the fifth day he may sit up longer; and the eye may be cautiously examined. If matters be going on right, the patient may sit in a darkened room, having a shade on his forehead; and he may look a little at large objects. Unless some unexpected untoward accidents should occur, he may gradually make the proper use of his recovered eye.

2. *Couching.* The operation of couching consists in removing the opaque lens and its capsule out of the axis of vision, not by removing it from the body altogether by an instrument, but lodging it in the vitreous humour of the eye, from which, in prosperous cases, it will be removed by absorption. This is done by a needle made on purpose, very slender, but having sufficient firmness to enter the eye without risk of breaking, and having a point which is slightly curved. A couching needle should not be longer than an inch; this affords the operator sufficient command over the motions of the point, and enables him to judge accurately how far it has penetrated into the globe of the eye, before he has an opportunity of seeing it through the pupil. In general, the only preparation necessary for the patient before couching, is to abstain from animal food for a few days, and to take some laxative medicine the day before the operation. If there is any particular disease, or train of symptoms, as hysteria or hypochondriasis, it may be as well to strengthen the system a little, previously; and if the eye-lids are diseased, we may attempt, by proper ointments, to restore them to as sound a state as possible. The operator desires the patient to turn his eye towards the nose, and then introduces the instrument through the sclerotic coat, at the distance of two lines from the margin of the cornea, and at the height of one

line below the transverse diameter of the pupil. The extremity of the instrument is next to be directed immediately over the opaque lens, and this is to be depressed a little downwards, in order to make room for the safe conveyance of the instrument in front of the diseased crystalline and its capsule. The capsule is to be lacerated in front, and conveyed with the lens deeply into the vitreous humour. A circumstance which is sometimes to be feared, is the appearance of some portion of the capsule of the lens in the way of the rays of light, forming what is called the secondary membranous cataract; in the operation for couching, the capsule being wounded on its anterior part, this seldom happens; but if it should, it will generally be absorbed again, and the patient need not undergo a second operation. After the operation, the patient ought for some time to be kept in bed, in a cool and quiet room, and on the following morning a saline purgative should be administered. If there be much inflammation of the eye, it is to be treated on general principles, as that arising from any other cause. It may happen that at one operation for couching, comparatively little may be effected. In this case, it may be repeated again and again, with no greater inconvenience than blood-letting; but if much violence be used in order to accomplish a great deal at first, or to show dexterity and speed in the operation, it may easily be believed, from the delicate structure of the eye, that irreparable mischief may be done. Mr. Hey, of Leeds, operated on the same patient twelve times. The pain and inconvenience is so much less than might be expected, that patients, when made sensible of the necessity of the repetition, find no difficulty in submitting to it. Itinerant oculists, whose business requires haste, are too apt to injure the sight, even when the operation has been well performed, by presenting various objects to the patient to try if he knows them. It would be foreign to our purpose to enter into a detail of the various kinds and degrees of consistence of cataract, and the various management necessary for their removal. Neither do we consider it expedient to state minutely the long list of contending arguments in favour of the methods of curing cataract by couching or extraction. Both have had eminent surgeons as their advocates; but it seems to be generally thought that couching is preferable, on account of the ease, the safety, and the efficacy with which it is performed.

IV. Closure of the Pupil. The operations of depression or extraction of the lens for the cure of cataract, are sometimes followed by a vehement inflammation of the membranes of the eye, especially of the iris, terminating in adhesion; which occasions the pupil to be almost or entirely shut, of which the necessary consequence is a diminution, and afterwards a total loss of sight. There is no remedy for this, but making an artificial opening in the iris, as a substitute for the pupil, either by a simple division of the fibres of the iris, or by cutting out a portion of that membrane, or by detaching the iris from the ciliary processes. The cases in which operations are advisable, and the modes of performing them, are subjects for the consideration of the most skilful oculists, and by far too subtle to be treated of in a popular work.

V. Opacity of the Cornea is a consequence of obstinate chronic ophthalmia. The pupil and iris are discernible through a kind of cloudiness, and the patient is not quite deprived of sight, but sees things as it were through a mist. The veins of the anterior part of the eye being relaxed by the long continuance of the inflammation, become turgid and prominent; they afterwards become irregular and knotty. Soon after, some reddish streaks are perceived, and in the spaces between these, a thin milky fluid is effused. The whitish superficial speck which results, is called a *nebula*. There may be either one speck, or several distinct ones. Though this opacity may at first occupy only a small part of the cornea, yet, if left to itself, it advances towards the centre of it, and a

dense opaque membrane is formed, which obstructs the sight partially or totally.

Treatment. Our first object is to make the turgid veins contract, by the use of astringent ointments or washes. There is an ointment called Janin's ophthalmic ointment, which has been found effectual when the opacity is recent, and not very extensive. This ointment is made by mixing thoroughly together two drachms of prepared tutty, two drachms of Armenian bole, one drachm of the grey oxide of mercury, and half an ounce of hog's lard. When first used, the quantity of hog's lard must be doubled. A similar purpose is served by the diluted citrine ointment. If these applications fail, the enlarged veins which run to the opaque part must be cut across; they should be allowed to bleed freely, and fomentations should be used to encourage this. The eye should not be opened for twenty-four hours. A tepid wash of rose-water and milk should be applied two or three times a-day. The nebula often disappears very quickly after this operation. But the use of astringents and ophthalmic ointments for some time, will be proper for preventing the recurrence of the complaint.

VI. Leucoma denotes a white opacity of the cornea, not superficial like the nebula, but owing to a dense coagulating lymph poured out from the arteries into the substance of the cornea, in consequence of violent acute ophthalmy. When recent, this opacity is of a clear milky colour, but when of older date it becomes pearl-coloured. If the organization of the cornea be not destroyed, the leucoma may be expected to disperse by the means employed for the cure of the inflammation; by general and local blood-letting, with other antiphlogistic remedies, and emollient applications to the eye in the first stage of ophthalmia, and slightly astringent washes in the second: these astringent applications cause the absorbents to remove the deposited lymph, and thus restore the transparency of the cornea. In cases of longer standing, our hopes of a cure are not at all sanguine; stimulating applications may be tried, and must be persevered in for ten or twelve weeks. Operations on the part for the cure of leucoma are generally unavailing.

VII. Staphyloma. A disease of the eye-ball, in which the clear part of the eye, loses its transparency, rises above the level of the eye, and sometimes even projects beyond the eye-lids. It is attended with complete loss of sight, and is very often the consequence of that species of ophthalmy which occurs in very young children, accompanied with a profuse discharge of purulent matter, and called by the common people the *gum*. It is also produced by the small-pox, and that chiefly when the pustules are dry, and the scabs fall off. As this disease of sight is incurable, it is best to let it alone, unless it grows so fast as to come out between the eye-lids, and occasion great pain and deformity to the patient. When this takes place, it is one of the most alarming maladies that can happen to the eye-ball, for when it can no longer be covered by the eye-lids, it is exposed to the air, and to the friction of the eye-lashes; the eye becomes painful and inflamed, the tears flow down the cheeks; the other eye is affected by sympathy, and the diseased one ulcerates. It has been attempted to reduce the size of the staphyloma by an issue or artificial ulcer at the bottom of the swelled part, but this has not been found to answer, and it is rather recommended to cut off the top of the projecting part, by which some of the humours of the eye are evacuated, and the swelling subsides, so as to allow the eye-lids to cover the ball. A degree of inflammation follows, on which the eye is to be covered with a poultice of bread and milk. Purulent matter is formed; the edge of the surface from which the projection was cut becomes red, contracts and daily diminishes, so that at last the wound is entirely closed, and an opportunity is given for the insertion of an artificial eye.

VIII. Exophthalmia signifies the protrusion of the eye from its socket, while

the globe is of the natural size, and free from disease. It lies towards the temple or on the cheek, and vision is quite lost. This occurrence may arise from violent concussion of the head, from a thrust with a stick or instrument passing between the orbit and the eye-ball, or from tumours within the orbit, which, as they gradually enlarge, push the eye-ball from its socket. There is generally no great difficulty in replacing the eye, when the protruding body is removed; and when the eye is replaced, inflammation is to be kept down by cooling topical applications, and by general or local blood-letting. If there should be any suppuration, care must be taken to procure a free and early vent for the matter. When a gradually increasing tumour has occasioned the displacement of the eye, the tumour must be removed by the proper surgical means, before it can be put back into its place. Whatever be the cause of the injury, its cure is always the easier the more recent it is.

IX. Dropsy of the Eye. In some cases, the vitreous humour of the eye is disorganized and broken down, and the aqueous humour is increased in quantity, causing the eye-ball to assume an oval shape, ending at the point of the cornea; it then enlarges to such an extent, that it projects from the orbit and cannot be covered by the eye-lids. This disease is sometimes preceded by blows on the eye, or on the adjoining temple, sometimes by an obstinate internal ophthalmia. Professor Beer of Vienna has seen the dropsy of the eye brought on by too long continuance of the use of mercury in the ophthalmia of gouty subjects. The cure consists in evacuating the fluid contents of the eye by a puncture, removing a small portion of the cornea, and exciting a slight degree of inflammation and suppuration; taking care that the inflammation does not go too far. When the operation is successful, the eye-ball diminishes in size, and gradually returns into the orbit. It is hardly necessary to mention, that vision has, long before this, been irrecoverably gone.

X. Cancer of the Eye. There is an affection of the eye which is thought to be of a cancerous nature, which is productive of great pain, and at last of death, unless the eye is completely extirpated. This complaint sometimes occurs after obstinate ophthalmy, sometimes after a blow on the eye, or after wounds, or staphyloma; and often after fungous excrescences, which form on the surface, or in the interior parts of the eye. The disease is said to be sometimes caused by irritating applications; but very often the causes are constitutional. It is most frequent in childhood. This disorder of the eye is commonly preceded by headachs, and an unusual heat in the organ, with an itching about it and the neighbouring parts. There is a considerable flow of tears; light is borne with difficulty at first, and soon becomes quite intolerable. To the itching succeeds a pricking sensation, and afterwards pains which are acute and lancinating. The eye enlarges and assumes a dull and livid hue, and its surface is rough and irregular. The cornea at length ulcerates and bursts; fungous growths project from the opening, which discharge a purulent fetid matter. As the disease advances, the fungous growths increase, and become livid. There are frequent discharges of blood. The pains are now incessant; the neighbouring bones and other parts become carious or ulcerated; and a miserable death ensues. As we have stated above, there is no way of saving the life but by extirpating the eye. For the method of doing this, we refer to books of surgery. The extirpation should be complete; and the lacrymal gland should also be removed. The antiphlogistic plan is to be continued for some days after the operation.

XI. Amaurosis, called also *Gutta Serena* or *Black Cataract.* This signifies a decay or loss of sight, when no defect is visible in the eye, except an enlargement of the pupil, and its being insensible to the stimulus of light. The approach of amaurosis is generally attended with pain in the head, which troubles the pa-

tient for a considerable length of time; there are various depravations of sight, as the appearances of stars or bright spots dancing before him; or he is sensible of something wrong about the sight when the candles are lighted. The patient feels as if some dirt or dust were upon his eyes, and is frequently wiping them. Sometimes he complains of a tension of the eye-ball, which is particularly troublesome. Whenever this sensation is experienced, the eye-sight becomes weak, and when it goes off, the patient is again able to see better. Amaurosis commonly attacks both eyes at once, and in those cases where the one is affected before the other, the interval is but short. Before the blindness is quite complete, patients can sometimes see when an object is presented at the side of the eye.

Causes. Amaurosis is owing to a palsy of the retina, or injury of the optic nerve in some part of its course, from a tumour, or from a fulness of the adjacent blood-vessels. It may arise from external injuries done to the head, from the suppression of periodical habitual evacuations, from the effects of deadly nightshade and other sedative poisons, from the absorption of the venereal virus, from great exertions of strength when the body is plethoric; and it is sometimes a sequel of certain fevers. In many cases, no cause can be assigned.

Prognosis. It is in general unfavourable. When amaurosis has been preceded by frequent headachs, with much pain in some part of the eye; when it occurs after fevers, or when it happens to the aged and infirm, a cure is hardly to be expected. If it occurs in connexion with pregnancy or hysteria, or in young subjects, our hopes are somewhat better.

Treatment. If a patient makes known his ailments early, he is to be treated, if at all plethoric, by evacuants, by leeching and cupping about the temples, and by an issue in the neck. Some cases have been treated by electricity or galvanism, and some by a course of mercury; others seem to have derived some advantage from frequent emetics, or from acrid powders which occasioned a discharge from the nose; but in the greater number of cases, the *gutta serena* has proved incurable.

EYE-LIDS. These are subject to various diseases, which are commonly mentioned along with the diseases of the eye, &c. (*See Inflammation of the* EYE.) 1. The inner surface of the eye-lids is often a good indication of the state of the disease of the eye itself; while a certain granulated condition of their surface exists, the eye is to be considered as still in a bad state, and when this is removed by blue vitriol, or other caustic or astringent applications, the eye begins to get well. 2. The habitual redness of the eye-lids so prevalent in scrofulous habits, is to be cured by astringent ointments, and general strengthening remedies. 3. Sometimes a hard warty substance grows under the skin of the upper eye-lid, which is hardly to be removed but by being cut out. 4. A troublesome and painful growth, known commonly by the name of *stye*, very frequently attacks the eye-lids; it is a kind of boil, in which is slowly formed a thick yellow matter; it may be hastened forward by bread and milk poultices, and discharged by a small puncture when it is ripe. Those who have once had stye, are very liable to frequent returns of it. 5. *Ectropium* signifies a turning out of one or both of the eye-lids. It may arise from elongation or swelling of the membranous lining of the eye-lids, or from a contraction of the outer skin of the eye-lids. The first kind may be the consequence of obstinate chronic ophthalmia, in scrofulous and relaxed constitutions; or it may happen after small-pox. The second species, or that turning out of the eye-lids which is owing to a contraction of the skin, may arise from the pits and scars left by small-pox, or by burns; or from the cutting out of a tumour when sufficient skin has not been left. The effects of this turning out of the eye-lids are very trou-

blesome. There is a continual discharge of tears over the cheek, a dryness of the eye-ball, frequent attacks of ophthalmia, intolerance of light, and opacity or ulceration of the cornea. When the first species is slight and recent, the best method is to destroy the elongated and relaxed skin on the inner surface of the eye-lid, by completely turning it out and rubbing it with lunar caustic, taking care to protect the eye from suffering by the caustic, by washing the eye with new milk. It will be necessary to use the caustic for several days, till there be a sufficient destruction of the internal membrane of the eye-lid, and of its inner surface. In favourable cases, this treatment is followed by the gradual return of the eye-lid to its natural position. The cure of the second species is more difficult. As it sometimes happens from the contraction occasioned by a cicatrix, it has been proposed to cut this through; but no great success has attended this operation. The cutting out of a portion of the membrane lining the eye-lid is the method most likely to succeed in remedying the eversion of that part. 6. *Entropium* is the reverse of the former case, and is a turning in of the eye-lids; it is also called *trichiasis*, from a Greek word signifying a *hair*, on account of the irritation produced by the eye-lashes fretting the ball of the eye. This turning in of the eye-lids is a frequent consequence of ulcers and scars of their margin, which is called the *tarsus;* or of ophthalmia arising from scrofula or small-pox. The cure consists in removing a certain portion of the skin of the affected eye-lid, near the tarsus. The lips of the wound are to be brought together by slips of adhesive plaster. A cicatrix forms, and the lid is turned out to its natural position. There is another kind of trichiasis, in which one or more hairs are turned in, without any alteration in the position of the eye-lid. It is difficult to accomplish a cure, as it is found that neither the pulling out of the hairs, nor burning the situation of the roots can be at all depended on. 7. Sometimes the upper eye-lid falls down, and cannot be raised or kept up by the action of the voluntary muscles. This may arise from a redundancy of the skin, or from palsy of the muscles destined to raise the eye-lid. When it proceeds from the first cause, a portion of the redundant skin is to be removed; and when palsy is the cause, the eye and surrounding parts are to be bathed frequently with very cold water; and the eye-brow and eye-lid are to be rubbed with the camphor liniment, or with a liniment containing a little of the tincture of cantharides. The shower bath, and bark, as correctors of debility, may be conjoined with the other methods employed.

F

FAH

FÆCES. The excrement .rom the belly.

FAHRENHEIT'S THERMOMETER. The divisions of the thermometer most in use in this country are those adopted by Fahrenheit, the assistant of Boerhaave. The zero is that point at which the mercury or spirit of wine stands in the tube when the bulb of the thermometer is plunged into a mixture of

FAH

salt and snow; the freezing point is at 32° above 0°; and boiling water at 212°: thus the space between the points of boiling and freezing water is divided into 180°. In the centigrade thermometer, the freezing point of water is zero; and the space between that and the boiling point is divided into 100°; in Reaumur's, the zero is the same, and the division between the freezing and boiling points is into 80°.

FAINTING. A temporary weakness or stoppage of the circulation and of breathing. Sometimes a faint comes on suddenly, but at other times gradually, with a feeling of languor and oppression, with giddiness, dimness of sight, and sounding in the ears. Along with these symptoms, the pulse and breathing become weak, and sometimes both these actions cease altogether. The face and the surface of the body become pale and cold. A cold sweat comes out on the forehead, and on some other parts of the body. During the faint, the patient is deprived of sense and motion. After a little time, he recovers, and the recovery is attended with a feeling of much anxiety about the heart. In many cases, vomiting is present, and sometimes the fit ends with convulsions or epilepsy.

Causes. Fainting is occasioned by depressing passions of the mind, by fear, horror or disgust: thus some faint at the sight of a sore in another person, or at the remembrance of any thing disgusting that they may have seen. Some faint at the approach of certain smells, even those which to most other persons would not occasion such an accident. Loss of blood occasions fainting, and a very small loss will sometimes do so even in a strong person. The alteration in the distribution of the blood occasions fainting, as we see in those who have it altered by the diminution of swelling, as by the letting off of dropsical waters; and in women soon after delivery; and this, independent of flooding. Disorders of the bowels, articles of food that disagree with the stomach, fatigue and weakness, confinement in crowded places where the heat is great, over-exertion in weak persons, are all found to occasion fainting. Organic diseases of the heart and great blood-vessels, ossification, or polypi, occasion fainting in those who are afflicted with them.

Treatment. In common cases, it is proper to place the person who is in a faint, in the horizontal posture, to allow the free circulation of air, to sprinkle the face with cold water, and to apply to the nostrils some volatile salts. When the patient faints during a bleeding, the flow of blood should be stopped, and the patient, if sitting up, should be allowed to lie down. If further bleeding be necessary, it often may be got when the patient is lying, but it is not unusual for the faint itself to diminish the action of the system as much as a large bleeding would do. When a person is subject to fainting fits from general weakness, the strength is to be restored if possible by bark, wine, nourishing diet, and tonic medicines. But when it arises from organic diseases of the heart, a permanent cure is not to be expected. The faintness that takes place after delivery in general goes off, merely by lowering the patient's head, and by giving a little warm wine and water; but when the faintings are accompanied with a quick, irregular, and feeble pulse, with the hands and feet cold, great danger is to be apprehended, as such a state is the consequence of serious injury or of the loss of blood. The cause is instantly, if possible, to be ascertained by the practitioner, and the proper remedies to be applied; but caution is requisite in the use of stimulants applied to the nostrils, lest suffocation ensue, or lest the patient, by coughing or sneezing, induce a dangerous or fatal flooding. *See* FLOODING.

FALLS. Sometimes persons fall from a considerable height with very little injury, at other times much mischief ensues from what would be considered a very trifling fall. Sometimes concussion of the brain or injury of the spinal marrow occurs, although no external injury is to be perceived. A fall may be attended with contusion, dislocation, fracture, or wound; and must be treated according to the varieties of the effects produced. A person who falls from a height is very commonly stunned by doing so; and a little time must be allowed for this to go off, without the surgeon or bystanders being too urgent in the application of stimulating remedies, or of blood-letting.

FALLING SICKNESS. *See* EPILEPSY.

FARINA, meal or flour obtained from various vegetables, as wheat, barley, oats, rice, rye, potatoes, &c.

FARINACEOUS ALIMENTS, are those which abound in the mealy portion above mentioned. The most eminent and universal of farinaceous food is that made from wheat-flour, or bread. Under the article BREAD, we have given an account of the particulars worthy to be known and remembered on that important subject.

FAT. An oily matter contained in the cellular substance of animals, of a white or yellowish colour. It seems to answer several important purposes; it facilitates the motion of the various parts where it is lodged; it fills up interstices in different situations; and as it is a bad conductor of heat, it appears to contribute to the preservation of the temperature of animals. It is used with other animal substances as an article of food; and where the digestive powers are strong, it proves highly nutritious. Those animals which sleep all the winter, are generally fat at the commencement of their long slumber, and come out of it very lean, owing to the fat having been absorbed and carried into their system for the purpose of nutrition. Fat has a tendency to accumulate very much in some persons who live luxuriously, using great quantities of animal food, with porter and other malt liquors, and who take little exercise. Others, without such causes, seem to get corpulent from peculiarity of constitution. It sometimes proceeds to such an extent as to be a real disease, incapacitating the individual from exercise and from performing the duties of life, besides rendering him liable to apoplexy and the other diseases analogous to it. Such overgrowth of fat is to be counteracted by abridging the quantity of food taken, by abstaining from malt liquors, and by taking constant and regular exercise. Instances are upon record, of persons who have made a sudden and total change in their manner of life, in order to diminish their corpulency; and this without any bad effects; but such sudden transitions from one mode of life to another are not advisable, and it is better to make them gradually, but steadily.

FAUCES. The name given to the back part of the mouth, and commencement of the gullet and wind-pipe.

FEBRIFUGE. A medicine or remedy supposed to have the power of curing fever. The correctness of modern pathology does not admit of any appellation so vague as a febrifuge: medicines are named from their more immediate effect, as emetic, purgative, diaphoretic, &c. although their subsequent effect be to cut short a fever, or to render it milder.

FEMALE COMPLAINTS. There are many disorders incident to the female sex, from the peculiarity of their structure, their functions, and their mode of life. The organs appropriated for the production and nourishment of their offspring, are themselves the seat of many diseases; and by their strong and general sympathy with other parts, they may occasion many disorders in the constitution. The periodical discharge is subject to many varieties, in its periods, regularity, quantity, and the ease or difficulty with which it is performed; and the periods of life when this discharge is begun, and when it terminates, are justly considered as very critical for the female constitution. Pregnancy, too, with all its attendants and consequences, is an occurrence of the most interesting nature to women. It is in many cases attended with pain, inconvenience, and danger; and lays the foundation of maladies which afflict them both during its course, and long afterwards. The manner of living, also, in women, gives rise to many disorders. Though the female in savage life, who shares in all the labours and dangers common in that state of society, becomes athletic and hardy, and brings her constitution to a level with that of the male, in vigour and the power of resisting external impressions, yet in civilized life the case is widely different; the luxurious habits, the se-

dentary lives, the susceptibility to impressions which women there acquire, render their constitution altogether unlike what it would be under another regimen, and give rise to numberless ailments and diseases. In different articles of this work, we have enumerated the disorders of many parts, and of the functions performed by women, for which the following may be consulted: WOMB *and its Diseases*, CANCER, MONTHLY DISCHARGE, PREGNANCY, HYSTERIA, DROPSY *of the* BELLY, WHITES, ABORTION, &c.

FERMENTATION. "Vegetables undergo spontaneous changes, by which their nature is completely altered, and new substances are formed. This process is called *fermentation*, and is divided into three kinds, the vinous, acetous, and putrefactive; the first so called, because, during it, vinous or spirituous fluid is formed; the second, because vinegar or acetic acid is produced; and the third, because the vegetable undergoes putrefaction, being almost entirely dissipated in the form of gaseous products. Sugar is the substance that undergoes the spirituous fermentation most easily, and by converting other bodies to the saccharine state, it causes them to undergo this change more readily. When sugar is dissolved in water, and a little yeast is added, the mixture soon becomes muddy, bubbles of gas rise through it, and it acquires a thick scum on its surface. When these processes have gone on for some time, the scum falls to the bottom, and the fluid again becomes transparent; its properties are also altered, it has lost its sweetness, acquired a hot pungent taste, and produces intoxication." (Dr. FYFE's *Elements of Chemistry*.) There are two kinds of intoxicating liquors produced by the vinous fermentation; the different kinds of *wine* obtained from the juices of plants, and the different kinds of *beer* procured from the infusion of seeds. In common language, the first kind is termed simply wine; and the second, malt liquors or fermented liquors. For their effects on the body, *see* WINE, ALE, BEER, PORTER, &c.

FERN. The powder of the male fern, *Aspidium Filix mas*, has been supposed to be good for expelling the tape-worm. The inner solid part of the root is the part used, in the dose of one or two drachms; but as strong purgatives are generally given either along with it, or immediately after it, it is not unlikely that when the worm is discharged, the good effect is owing to the purgatives. The powder of the male fern was an important ingredient in the celebrated worm powder of Madame Nouffer.

FETID. Putrid or ill-smelled.

FEVER. No subject in medicine is of greater importance than this, because, either as a primary disease, or an attendant and symptom of others, fever forms a great part of the maladies to which the human body is subject. When a person has a quick and strong pulse, with much heat of the skin, and great thirst, he is said to be feverish, or to have the symptoms of fever. Certain diseases present a long train of symptoms, in which those above enumerated are constant and predominant, though accompanied with very many others; these are denominated *Fevers*, with some distinguishing epithet to mark their character, or what physicians call their type, as *intermitting*, *remitting*, or *continued*. There are various epithets applied to fevers both in books and in common language, taken from some symptoms which have attracted particular attention, as putrid fever, low nervous fever, brain-fever, &c. Or from the supposed causes and places of their origin, as ship-fever, jail-fever, hospital-fever. In other diseases, though the symptoms of fever are very conspicuous, yet they are only regarded as indicating another affection, viz. inflammation; and the disease takes its name, not from the fever, but from some other circumstance, as inflammation of the eye, pleurisy, rheumatism. Many eruptive diseases have strong feverish symptoms, as measles, small-pox, and scarlet fever. We shall in this article give some account of the different kinds of fever, properly so called.

I. Intermittent Fever. *See* Ague, under which the symptoms and treatment have been fully detailed.

II. Remittent Fever. This fever differs from the ague in the circumstance, that instead of complete intermission between the attacks, there is only an abatement of it at uncertain intervals. Remittent fevers occur principally in warm climates, or in warm and moist situations, or in those that are marshy and abound with wood and water, furnishing organized matters for putrefaction. Before the attack of remittent fever, the patient is heavy and languid, and is troubled with frequent yawnings or sighings, and alternations of heat and cold. When the fit comes on, there is pain in the head and back, thirst, and difficulty of breathing, the spirits are dejected, the tongue is white, there is a yellowness about the eyes and skin, sickness, and vomiting of bilious matter, with a small and frequent pulse. Sometimes the symptoms above enumerated are very severe, and accompanied with headach, violent flushing of the face, and delirium; the tongue is covered with a dark brown fur, the breathing is laborious, the pulse quick and throbbing. In mild cases, the symptoms abate, or a remission takes place, though the patient does not, as in ague, become quite free from complaint; in cases more severe, the remission is indistinct or imperceptible, the symptoms continuing always present with considerable severity. Remittent fevers generally run their course in five or six days, but sometimes they are protracted to a longer period. A favourable termination may be hoped when the remissions are distinct and the symptoms mild; but when there is little or no remission, and the putrid symptoms prevail, the recovery is very doubtful. Remittents in hot and moist climates, and during the autumnal months, have much tendency to the putrid form, and are consequently of the greatest danger.

Treatment of Remittent Fever. On the first attack, if there be not very great irritability of the stomach, and tendency to vomiting, it may be useful to give a gentle emetic, for the purpose of removing any undigested food which might afterwards prove a source of irritation. Vomiting, however, is in many cases so violent, that we are rather called upon to check it. The saline effervescing draughts prove highly useful in allaying this troublesome symptom. For a long time, bleeding was considered as a remedy totally inadmissible in the fevers of warm climates; and, indeed, when their exhausting influence has continued for some time, the abstraction of blood would hasten a fatal termination; yet in vigorous Europeans, in the very early stages, blood-letting to a considerable extent is highly useful. The bowels are to be most diligently attended to. Purges, wholly or in part composed of calomel, are much celebrated by the practitioners of warm climates; but we are also to give other kinds, as saline purges, or senna with tamarinds, the compound powder of jalap, or castor oil. When the bowels have been thoroughly emptied, if there is considerable restlessness and irritation, and if no delirium be present, an opiate will prove of signal service in allaying irritation, and producing a salutary moisture on the surface of the body. When there is a remission, advantage should be taken of it to give the Peruvian bark, or the sulphate of quinine, which often has the good effect of making a complete intermission; and such intervals, when successfully improved, may gradually be multiplied and lengthened till the fever abates altogether. Other symptoms as they arise must be palliated; the dry parched skin may be spunged with tepid or cold vinegar or water; the thirst quenched by lemonade, by barley-water, by small beer, or the like; if there be much debility and threatened sinking, wine, ammonia, nourishing diet in light form and moderate quantities are to be administered; the bowels are to be kept open, all irritation is to be avoided, cool and pure air is to be admitted, and the bed and body-linen to be often renewed. During convalescence,

care must be taken to avoid all exposure to foul and unhealthy air, all indigestible food must be abstained from, the bowels kept regular, and a due proportion of wine and nourishing diet must be allowed. Tonic medicines, particularly the bark, are to be freely used; and in many cases, it may be advisable to leave the place where the fever has been prevalent, and to remove to a healthier climate.

III. Continued Fever. This is the fever with which we in this island are most familiar; and from the earliest records till the present day it appears to have prevailed in almost every country, and in every class of society. It is called *Continued Fever*, because there is no complete intermission, or even no distinct remission, from the commencement of the fever to its close; and from various circumstances connected with the fever, or which have attracted particular attention, it has obtained a great variety of names. It is called the low nervous fever, the slow fever, the brain-fever, the putrid fever; the jail, ship, or hospital fever; the spotted fever; and from the writings and conversation of physicians, one of its technical names, *Typhus*, has passed into common discourse, and has lately become the popular name for the worst and most fatal forms of it. A physician might, with the most correct use of nosological language, pronounce a patient to be affected with typhus, while there is no symptom to excite any just alarm; but it may be proper, when speaking to persons not professional, to confine the term to their interpretation of it, and to use some of the other phrases, such as low or nervous fever, in order to avoid giving unnecessary alarm.

During the same epidemic, and from the same contagion, continued fever may assume a great variety of forms in different cases, and in the same patient in the progress of the disease; from the mildest symptoms of heat, thirst, and anxiety, to the furious delirium which gets it the title of brain-fever; or the spotted skin, the black and parched tongue, and twitching of the tendons, which accompany malignant and fatal typhus.

Symptoms of Mild Continued, Slow, *or* Nervous Fever, *the Typhus Mitior of Physicians.* A person feels himself seized with languor, lassitude, and a disinclination to motion; he is affected with chills, alternating with flushes of heat; he feels pain in his back and limbs, as if tired or bruised; he has thirst, headach, and a tendency to vomit; his thoughts are confused, and he talks incoherently, especially towards evening. It is not uncommon for one who is really ill of fever, to go about for some days in a listless, languid state; but at last he is obliged to give up the fruitless struggle, and betake himself to bed. An experienced person, even before the patient himself complains, may detect in his manner, and in the sunken countenance and unhealthy eye, the malady which is at work upon him. The pulse is quick, weak, and irregular, the heat of some parts of the surface is diminished, and there is a cold clammy sweat on the forehead. The urine is commonly pale, often limpid, or of a whey colour, or like vapid small-beer. The tongue at first is covered with a thin whitish fur, at length it becomes dry, red, and chapped, or covered with a brownish crust; and similar foulness gathers about the teeth. In a few days the giddiness, pain, or heaviness of the head increase, and there is a ringing of the ears which very frequently is the forerunner of delirium; in many instances, this delirium is not violent, but seems rather a confusion of thought; the patients muttering continually to themselves and faltering in their speech; yet when a question is distinctly put to them, they can be roused from their delirium and give a rational answer, but soon fall back into their dozing state. Sometimes this delirium abates a little through the day, but harasses the patient the whole night, the natural sleep departing from him for very many successive nights. The tongue now grows very parched, and yet the patient, from his insensibility, does not complain

of thirst; the skin sometimes continues dry, at other times is covered with a cold clammy sweat, and fainting is apt to come on if the patient attempts to sit up. The sinews of the arms and legs are seized with convulsive twitches and startings; there is a gulping or choaking in the throat, and also hiccup, all which are indications of very great danger. Profuse cold sweats break out, and thin watery stools are discharged, both of which tend greatly to weaken the patient. As the fatal termination approaches, the extremities grow cold, the nails pale and livid, and the pulse weak and fluttering. The delirium passes on to complete insensibility, from which external impressions cannot rouse the patient; his stools and urine pass off involuntarily; and the frequent twitchings of the tendons are a prelude to strong general convulsions, which put an end to life.

It is one of the remarkable circumstances of fever, that it has a tendency to run a certain course, and to terminate either in death or health within a certain period, and on particular days of the fever, which physicians have therefore termed *critical days*. The duration of fever depends on a variety of circumstances, on the constitution of the patient in general, or on the particular state of it at the time of attack; it depends also on the malignity of the contagion, on the way in which the patient has been treated from the first, and on the situation where he is confined being more or less favourable. The period of duration varies from a very few days to twenty, or even thirty or forty; and sometimes, when the fever or excitement is over, many untoward symptoms may continue for a long time, especially debility, and in some cases a degree of aberration of mind. *See* CRITICAL DAYS.

Prognosis. When the termination is not in death but recovery, there are certain favourable symptoms which occur. The tongue becomes gradually moister and cleaner; the perspiration, instead of being cold, clammy, and partial, is general, warm, and kindly; the pulse diminishes in frequency, the delirium abates, and the patient enjoys refreshing sleep. In these circumstances it is commonly said that "he has got the *turn*." The appetite improves, the urine becomes natural, and sometimes a salutary looseness comes on. A degree of deafness is rather a good symptom. Sometimes boils form in some part of the body, as behind the ear; and from their appearing to have some share in removing the fever, such abscesses, or any other discharge, are called critical. How to induce those favourable symptoms shall be afterwards mentioned. Such are the more usual symptoms of the common continued fever, the slow, nervous, or mild typhus fever. The epithet *mild* may appear much misapplied when used to designate a disease so frequently terminating fatally, but it is to be considered as contrasting that form of fever with another of a more deeply malignant and rapidly fatal nature. Such a form is now known to the people at large by the term *Typhus*, and it is also called the putrid, malignant, pestilential, or spotted fever.

Symptoms of MALIGNANT CONTINUED FEVER, *the* TYPHUS *of popular discourse, the Typhus Gravior of Physicians.* The malignant typhus attacks with more violence than the other; the pulse is sometimes tense and hard, but commonly quick and small; the headach, giddiness, sickness and vomiting are very considerable even at the beginning. The eyes appear full and heavy, and even a little inflamed. There is a throbbing of the arteries of the temples and of the neck, even though the pulse at the wrist be very small; and this is a pretty certain indication of an approaching delirium. The weakness, faintness, and dejection of spirits are very remarkable and sudden, the breathing is laborious and interrupted with sighing, and the breath is hot and offensive. There is pain of the back and loins, with universal weariness and soreness of the limbs; much heat, pain and oppression at the pit of the stomach, with vomiting of black offensive matter. The tongue

becomes quickly dark and dry, sometimes of a shining livid colour, or stiff and black, while the teeth and lips are furred with a black tenacious crust. The thirst is at times great and unquenchable; but in other cases, the patient seems insensible to the dry state of his mouth and tongue, and though in the utmost need of drink, does not ask for it. The stools are for the most part extremely fetid; they are green, black, and otherwise discoloured. The body is covered with *petechiæ* or innumerable spots like flea-bites, or with spots larger, greenish and livid; sometimes with purple marks like those left by stripes or blows inflicted on the body. The inside of the mouth and throat is covered with *aphthæ*, or small white ulcers, which are soon succeeded by great difficulty of swallowing, pain and ulceration of the throat, and gullet, probably extending to the bowels, and producing there destructive ulceration, as shown by the discharge of bloody, fetid stools, which, when not instantly removed, prove highly infectious. The extremities become cold and livid, and for many hours before death, a cadaverous smell issues from the body. Sometimes the contagion producing the disease is so virulent, or meets with a constitution and circumstances so disposed to receive its influence, that the patient is cut off within three or four days; sometimes the fever lasts longer, but in general it has not the protracted duration which occasionally marks the milder form. These are the general appearances exhibited by continued fever in our climate, though sometimes in different epidemics, peculiar symptoms may be noticed. Thus it may happen, that a great many patients whose primary and undoubted disease is typhus, evidenced by its contagious nature, shall have much determination to the chest, marked by cough, pain of the side, and difficulty of breathing; or to the head, marked by more than usual disturbance of the intellectual functions; or there may be great tendency to complaints in the bowels, marked by griping or diarrhœa. In such cases, these symptoms must be attended to in proportion to their urgency.

Causes of Typhus. The most experienced and judicious physicians are agreed, that the chief, if not the only cause of the fevers above described is contagion, or the poisonous matter exhaled from the human body, when long confined in one place without ventilation or cleanliness, or when numbers of men are crowded together under similar circumstances. This accumulated and undispersed matter excites the fever in one person, and from him a matter is exhaled capable of infecting great numbers more. Under the article Contagion, we have given an account of the principal facts relative to the propagation of infection; and shall only remark here the necessity of attending most particularly to the prevention of its spreading; and warn every person, whether professional or not, against being deceived by any arguments however plausible, or any assertions however confident, so as to omit the most rigorous precautions. As we have no intention of entering upon controverted points in any part of this work, we shall not state what has been said for or against the infectious nature of fever; but shall simply remind the reader, that the precautions which are necessary for the healthy, are those which tend most to the proper management of the sick; and that all those means which have been thought to destroy contagion, when they are put in practice where it is not, can do no harm, but have the most salutary effect on the air and cleanliness of the sick-chamber, ship, or barrack. When the infectious matter is generated, there are certain circumstances which favour its action, and certain persons are more subject to that action than others. Every thing of a debilitating and depressing nature renders the contagion more likely to take effect. When men are debilitated by fatigue, watching, and scanty food, the contagion rapidly seizes them; as has too often been shown on a large scale, from the wide-spreading epidemics which followed

the sieges or the famines of ancient times, down to the fatiguing retreat of the British to Corunna, and the destructive fever which, in 1819, so fearfully thinned the numbers of the starving and dispirited people of Ireland. Hence, exposure to cold, and the exhaustion that follows a debauch, so often are the immediate precedents of a fever; and hence the very fear of infection renders one more especially liable to be seized with it. Hence also may be explained some of the apparent good effects of amulets, and substances said to protect against infection; they may do so by the confidence which the person has in their efficacy, however absurd and superstitious that confidence may be. Persons who have suffered great evacuations, whether by bleeding, by purging, or by salivation, who have been long under the influence of depressing passions, who have been weakened by intemperance or by much study, whose diet has been poor and scanty, and who have been long confined in damp unwholesome air; all such are peculiarly susceptible of the contagion of fever. It can hardly be necessary to state the opposite of all this, as the proper means of guarding against contagious fever. Persons should keep the body well clothed; should avoid exposure to cold, fatigue, and intemperance; should guard against fear and other depressing passions, should avoid protracted and unnecessary presence in the chambers of the sick, should not visit them when fatigued or fasting, and should abstain from food difficult of digestion.

Treatment and Cure of FEVER. The subject of fever has furnished the debateable ground for the contests of physicians in many succeeding ages; on this they have shown how defective their philosophy has been; and have increased the difficulties of an art which many have regarded as conjectural at the best, by seeking an explanation of phenomena, not in the sober realities confirmed by observation and experiment, but in hypotheses which had no other foundation than the contrivances of an ingenious fancy. To give a new theory of fever seemed to be the grand object of every successive writer of a system of physic; and much eloquence was employed in subverting the works of their predecessors, and endeavouring to establish their own. If the theories of fever have been numerous, the modes of practice have hardly been less so; and it has been treated at different periods by the most opposite and contradictory means. At one time, patients in fever were treated with the most stimulant and heating substances, fresh air was excluded with the most cruel accuracy, and the patient was loaded with blankets to procure a sweat. At another time, the reverse of all this was practised, the application of cold was employed, with bleeding, abstinence, purging, and a rigorous system of depletion. The method most commonly adopted in the treatment of fever, by the judicious and enlightened practitioners of modern times, is nearly the following. When a person has been exposed to fever infection, and complains of weariness, pains of the back and limbs, with headach, thirst, or tendency to vomit, and more or fewer of the symptoms above enumerated, there are some means of cutting short the fever, and not allowing it to be fully formed. Two of the most certain of these are, the immersion of the patient in cold water, or dashing it over him, and the giving of an emetic. The numberless cases recorded by Dr. Currie of Liverpool and others, of the success of the cold affusion in cutting short the progress of typhus, are ample proofs of its efficacy and utility; and warrant all medical men who have to deal with the rougher classes of society, to resort to it with the utmost confidence, and to regard it as a valuable remedy in barracks, prisons, ships and hospitals; but in private practice, and among more delicate subjects, we are obliged to use cold in a milder form, and rarely attempt to cut a fever short by this means. Emetics, however, are a safe and less alarming way of endeavouring the same thing; and if

antimonials form either the whole or part of an emetic, we expect much good both from the shock given to the body, from the freeing of the stomach from undigested matters, and from part of the medicine getting down to the bowels, and acting as a purge. If the fever is not cut short, we may soon expect the excited state of the system, the quickened pulse, the throbbing temples, the headach, thirst, and hot and dry skin. In this state, however rash it would have been considered a few years ago to bleed in typhus, we find that it is a safe and salutary practice; it bridles the circulation, lessens the danger of the disease, and prevents the patient from getting into that cadaverous state, to which the name of *typhoid* was applied, in which it certainly would be destruction to bleed; and from which former physicians drew their inferences to the early period of the disease, but to which period they were quite inapplicable. Bleeding, then, in the *early* stages of typhus, is proper and necessary; but if the disease goes on, we are to be cautious as to the frequency of its repetition. To allay the heat of the surface, frequent spunging with cold water, or vinegar and water, is highly salutary and refreshing; and the thirst is to be allayed by means of thin gruel, toast and water, jelly and water, small beer, cider, or spring-water. To promote a gentle perspiration, which is always salutary, antimonials are given in small doses, and at intervals of three or four hours. For this purpose, the patent medicine contrived by Dr. James, has acquired a lasting reputation, and though it is believed to be very much the same as the antimonial powder of the Edinburgh Pharmacopœia, (called oxide of antimony with the phosphate of lime,) still there seems to be something about the genuine James's powder, which entitles it to the preference. The dose is three or four grains every four hours, till a gentle perspiration is brought on. The same may be attempted by giving the solution of tartar emetic; of which two grains are to be dissolved in four ounces of water, and a table-spoonful to be taken every two hours. Camphor may also be given for the same purpose, the camphor julep, in doses of a table-spoonful every hour. It is hardly advisable to give any sudorific containing opium, in the early part of the disease; for fear of increasing the tendency to the head, and of shutting up the bowels. These must be carefully attended to; laxative medicines must be given frequently; and we must not be deterred by the consideration of the almost total suspension of the appetite for food. The quantity of feculent matter, which requires to be brought away, is surprisingly great; and much credit is due to Dr. Hamilton of the Royal Infirmary of Edinburgh, for the care with which he attended to this piece of practice, and inculcated it, at a time when its use in typhus appeared a dangerous innovation. We may administer any of the varieties of purgative medicines we choose, there being no reason for very nice selection. It should be a matter of strict attention quickly to remove from the patient's chamber all the alvine and urinary discharges; if the physician desires them to be kept for his inspection, they should be kept where they will be harmless. The delirium is a very distressing symptom; it is to be palliated by applying cold to the head, by avoiding as much as possible all irritation, and occasionally a gentle opiate will answer the purpose; but we must studiously avoid opiates when the heat is ardent, and the pulse quick and strong. If the vomiting continues long, it is to be checked by giving effervescing draughts, which are made with what are called soda powders in the shops. They are made by adding a drachm of crystallized citric acid or concentrated salt of lemons dissolved in an ounce of water, to a drachm of carbonate of potash dissolved in a like quantity of water; and when the two solutions meet, a frothing or effervescence takes place; and this may be done in the stomach, by swallowing the solutions separately very quickly one after the other. The effect generally is to allay the vomit-

ing, and to produce a gentle moisture on the skin. Drink should be given to the patient; and preserved fruits, jellies, or the like, put into the mouth, although he does not complain of thirst, which from the stupor and delirium he is not able to do. When in the advanced period of the disease, the patient gets into the low, depressed state, even though the delirium continues, we are to proceed on a stimulating plan; and this without any fear of increasing the heat, thirst, and delirium. Very great quantities of wine may be taken; and indeed what would produce intoxication in a healthy person, has only the effect, in the low, putrid typhus, of stopping the delirium, and keeping the patient alive. Of course, we are not to begin suddenly to give large doses of wine, but try the effect of one or two glasses a-day, mixed with water, and gradually increase the quantity according as we deem it proper and necessary. We may also give the bark in substance, or in tincture or extract, or in the form of sulphate of quinine, of which five grains are a full dose, equal to an ounce of the common powder. Huxham's tincture of bark, which contains a considerable proportion of aromatics, is an excellent stimulant and cordial in typhus. In cases of extreme debility and apparent sinking, it may be advisable to apply mustard poultices to the feet. We have said little about the diet of patients in fever, because by a salutary instinct of nature, they have no desire for food, which, in the suspension of digestion, and the assimilating powers of the system, would be an injurious load rather than a benefit. The returning appetite for food is one of the earliest signs of the fever declining; and we are then, with great caution, to allow a little light pudding, or weak chicken-broth, and to judge by its effects whether it would be proper to repeat it.

These are some of the more remarkable features of typhus fever, both mild and malignant, with the modes of treatment which the judicious practitioners of our day adopt; and though it is still a disease of great danger, especially when it occurs in combination with poverty, filth, and wretchedness of every description, yet we are inclined to think that an epidemic typhus is not nearly so much to be dreaded as in former years; provided the public authorities duly second the cares of the physicians in separating the sick, and in promoting ventilation and cleanliness, and whatever may dilute the contagion, and render it less virulent.

Fever, *at Edinburgh, in* 1828-29. Such was the opinion which considerable experience justified, respecting the comparative mildness of typhus, within the last thirty years; but since the first edition of this work was published, Edinburgh was visited by an epidemic fever, which taught us anew the necessity of being very cautious in making general assertions on medical subjects. The epidemic of winter 1828-29 was extensive and formidable; and the sufferers were principally among that class of people who had the power of procuring every comfort, and who were well accustomed to attend to ventilation and cleanliness. It began about the middle of November, and continued till far on in March. No poverty of living, no squalid wretchedness could be blamed as inducing the disease; as it frequently occurred in the most airy situations, and among those who had every means of health at command. It happened often in children; and was generally long and tedious in them, leaving great weakness for a considerable time, even when recovery took place. There was no general and predominant symptom that could be said to characterise the epidemic. It was a slow and mild typhus; but its safety was in no proportion to its mildness. Many lingered on for several weeks, not very ill, but died at last. The province of the physician seemed to be rather that of watching symptoms, and aiding the operations which nature pointed out as salutary, than of directing and forcing any plan of cure. Blood-letting was not in general of much service; but it was always pre-

per to attend particularly to the bowels, and to keep up a due discharge from them. The great debility in some, early led to the use of wine and other stimulants, which for a while appeared to do good; but in others, had very soon to be withdrawn; while a third class seemed to be kept alive principally by the judicious use of wine and cordials. It was of much service when we could succeed in procuring a moderate perspiration by antimonial medicines; and acids were very beneficial in allaying the thirst and feverish action. Though the epidemic spread very widely, the contagion did not seem very virulent or active. Proper precautions to prevent unnecessary intercourse, and to promote due ventilation, proved sufficient to hinder its spreading through whole families, although more than one individual living in the same house were ill at the same time.

FEVERS OF CHILDREN. From the irritability of infants, and the delicacy of their frame, few of the disorders to which they are subject are without feverish symptoms; as quickness of pulse, heat of skin, thirst, and restlessness. Such symptoms occur from teething, disordered bowels, worms, diseases of various glands, eruptive disorders, and affections of the chest, or a cold; and according to the violence of the fever, and its cause, and also the disease accompanying it, bleeding, purging, antimonials, or the warm bath, are to be directed, as we have detailed under the various complaints of children.

FEVER, CONTINUED, *of Children.* Though the feverish disorders of children are very frequent, they are in general short in their duration, except when they arise from some internal organic cause; and infants and children seem not to be very apt to take those disorders strictly denominated fever. Infants have continued with their mothers during all the stages of a fatal typhus, without being seized with it; but Professor Hamilton of Edinburgh mentions, that the common low fever sometimes prevails as an epidemic among children. It begins more frequently with languor and fatigue, than with a distinct chilly or cold fit. At the commencement, sickness at stomach occurs, which is followed by heat, thirst, pain in the head and back, and restlessness. Within thirty-six hours, there is in many cases a very remarkable remission of the fever, followed by a great exacerbation. If the fever do not abate on the fourteenth day, it is apt to last till the twenty-first, or twenty-eight, or even the thirty-ninth day. Where it is much protracted, insensibility, with inability to swallow, sometimes occurs for a considerable time before the crisis; and after the original disease has ceased, there is always hazard of hectic fever, or dropsical complaints, succeeding.

Treatment. On the first appearance of illness, a full dose of ipecacuan should be given, and as soon after as the stomach can retain it, some powerful laxative medicine. If the heat of skin is not relieved, the body is to be spunged with cold water, to which a little vinegar has been added; and cooling drinks, as toast-water, good small beer, cold water, &c. should be allowed. If there is fixed pain in any particular part, or bleeding at the nose, a few leeches should be applied to the temples, or to the pained part. If the remission takes place after this treatment, a little wine and water prudently given, may prevent the return of the fever. If the first symptoms have been neglected, the emetic had better be omitted, but the other means are to be employed. When the fever is protracted, the chief things to be attended to, are scrupulous attention to cleanliness, proper ventilation, and the admission of cool air into the apartment; spunging the body when the heat is greater than usual, giving cooling drinks, and such laxative medicines as will procure two or more stools daily. When the low stage begins, the strength must be supported by the use of wine, pure or diluted, with cordials, and bark in the form of sulphate of quinine. When considerable oppression, tendency to vo-

miting, or much restlessness, with great frequency of pulse, and hot skin, with a parched tongue, take place pretty early in the course of the fever, some antimonial preparation, joined with calomel and jalap, or aloes, has been found to occasion the free discharge of a great quantity of bilious matter which had resisted other means, and to produce a very unexpected and rapid cessation of all the alarming symptoms. There is nothing more remarkable in the low fever of children, as well as of adults, than the astonishing recoveries that sometimes take place from the utmost degree of exhaustion and death-like torpor. Persevering efforts are to be made till the last, by giving wine and other cordials by the mouth; and in the long protracted weakness, nourishment is to be supplied by clysters, containing beef-tea, wine, or milk. Blisters or mustard poultices applied to the soles of the feet, have seemed to rouse the vital powers, after they had been supposed nearly extinct. Great attention must be paid when recovery begins, not to overload the stomach, nor to allow the bowels to go into a bad state; exercise and country air, with cold bathing, are to be directed.

FEVER, MESENTERIC, *of Children.* There are certain glands situated in the mesentery, or that membrane connected with the small intestines, through which glands the nourishing fluid called chyle passes. These glands are apt to be obstructed in scrofulous subjects. When this obstruction is just beginning, various feverish symptoms occur, like those arising from worms. It attacks children from the age of three or four years, is accompanied with fever, which remits or intermits, but without any regularity; there is loss of appetite, swelled belly, and pain of the bowels, which are irregular, sometimes costive, at other times too open. There occur flushed cheeks or a total loss of colour, impaired strength and spirits, a hard and swelled belly, with emaciated limbs. The lungs are very frequently affected. This fever sometimes takes place in infants at the breast, and it is often a consequence of long protracted bowel complaints, and of difficult dentition, and of measles. Among the poor, it frequently is owing to coarse and unwholesome diet, and the want of exercise and cleanliness.

Treatment. Preparations of mercury seem to be often useful, not by their deobstruent power, but by their favourable action on the bowels. Calomel in small doses, combined with rhubarb or some other purgative medicine, given once or twice a-day, is of great service in keeping up a proper action of the digestive organs; and this is to be further assisted by tonic medicines, and a nourishing diet, with warm bathing. The use of the calomel must be persevered in for a long time. The tonic medicines are preparations of steel, as the tincture, or some chalybeate water. An emetic occasionally is proper Friction with anodyne balsam, on the belly, the spine, and the limbs, is to be daily employed. The cold bath may be directed when there is any appearance of convalescence. The diet should be light and nourishing; good broth, with a little animal food or jelly, avoiding fat and greasy aliments, pastry, and all indigestible substances; and watching the effect of the food given, that it do not occasion heat and feverish symptoms. The purging which too often occurs towards the fatal period, is to be checked by opiates and the chalk mixture.

FIBRES. The fine and minute threads into which muscular flesh and nervous filaments can be divided, so as to be seen with the naked eye. We have reason to believe that these fibres are composed of fibrils, divided so minutely as to evade the eye, and even the microscope.

FIBRINE is a substance obtained by washing clotted blood repeatedly in water, till it ceases to give out any colour or taste to the liquid. It is also procured from flesh by maceration in water for many days, and subjecting it to pressure, to squeeze out the water. When fibrine is exposed to heat, it contracts very suddenly, and moves like a bit of horn, ex-

haling at the same time the smell of burning feathers. "Fibrine," says Dr. Thomson, "exists only in the blood and the muscles of animals; but it is a genus which includes as many species as there are varieties in the muscles of animals; and the great diversities of these substances is well known. The muscles of fish, of fowl, and of quadrupeds bear scarcely any resemblance to each other." Those articles of food which abound much in fibrine, as hare-soup, venison, beef, mutton, &c. are therefore called fibrinous aliments.

FIGS. The fruit of the *Ficus Carica*, a tree of a middling size, with large leaves cut into five segments. It grows spontaneously in the warmer climates, and is cultivated in our gardens. The best figs are brought from Turkey; many from the south of France, where they dry them by exposure to the sun, after dipping them in hot ley, made of the ashes of the fig-tree. The recent fruit, completely ripe, is soft, succulent, and easily digested, unless eaten in immoderate quantities, when it is apt to occasion flatulency, pain of the stomach, and diarrhœa. Figs are very nutritious, as their sugar is united with a large portion of mucilaginous matter; grateful to the stomach, and easier to digest than many other of the sweet fruits. Figs are used in medicine as emollients, and as an ingredient in pectoral decoctions; they are also used as cataplasms to promote suppuration. They are applied as warm as can be borne, to gum-boils, and other parts where poultices cannot be confined. (Parr.)

FISH. A great variety of the different species of fish is used as articles of diet; but without enumerating all these, we shall mention in general, in what respects fish differs from the food derived from land animals, and in what kinds of disorders it is most allowable. Fish has generally been considered as holding a middle rank between the flesh of warm-blooded animals and vegetable food. Though not so nourishing as beef or mutton, it is sufficiently so for all the purposes of active life; but a larger quantity is required to satisfy the appetite, which returns sooner after fish than after meat. Fish gives less excitement during digestion than meat or other nourishing food, and is therefore a useful article of diet to persons recovering from acute diseases; but though reputed light and nourishing, it is not so proper for patients labouring under stomach complaints, with whom it very generally disagrees. Turbot, cod, whiting, haddocks, flounders, and sole, are the least heating of the more nourishing kinds; and the flakiness of the fish, and its opaque appearance after being cooked, are proofs of its being good; but when it is bluish, and has a degree of transparency after being sufficiently boiled, it shows it to be of an inferior quality, or not in season. The *whiting* is well adapted for weak stomachs, and the *haddock* resembles it, but is of a firmer texture. *Cod* is an excellent food, but not quite so digestible as whiting or haddock. *Turbot*, though excellent in itself, is often rendered indigestible by the quantity of lobster or oyster sauce eaten along with it. *Salmon* is perhaps the most nutritive of the fish that are eaten; it is, however, heating, oily, and not very digestible; the best condiment for it is vinegar. Salmon is in the highest perfection for some time previous to its spawning: this takes place at certain seasons of the year; and this is one reason, among others, why the periods of catching salmon in this country are fixed by law. Salmon, when taken at a time when the fish is unfit for food, has been known to produce disease. *Herring* is worthy of great commendation, though it is oily and apt to disagree with many stomachs. In many instances, severe cutaneous affections have been known to follow the use of fish of different kinds; this probably depends on peculiarity of constitution, and in general goes off when the process of digestion is finished; but in some cases there is reason to suspect a poisonous quality about the fish.

Fish invariably require some condiment or other; and a very common one

is butter, which is one of the worst, except for very strong stomachs.

The seasonings that are eaten with fish are various; some of them oily and indigestible; others of a stimulating nature, may assist the stomach to digest them the better; but vinegar and salt are the most universally applicable.

Boiling seems to be the best way of cooking fish; frying them with oil and other fat substances is not so proper. Potatoes are almost the only vegetable that should be eaten with fish. Fruit should not be eaten at the same meal with fish, and milk also should be avoided; severe bowel complaints have followed such mixture.

FISH-POISONS. We have mentioned in the preceding article, that cutaneous eruptions sometimes follow the use of fish as a part of the diet. This may arise from peculiarity of constitution in the person using them; but many instances have occurred in which fish, especially shell-fish, have produced such deleterious effects on the constitution as can hardly be accounted for, except on the supposition of an absolute poison being generated in some parts of the fish. Dr. Thomas, who writes from actual observation in the West Indies, mentions several fish possessed of a very deleterious quality, as the "barracouta (*perca major*), king fish (*xiphias*), cavallee (*scamber*), rock fish (*perca marina*), smooth bottle fish (*ostracion glabellum*), the conger eel, and the yellow-bill sprat. From eating this last-mentioned fish, certain and rapid death is almost sure to ensue; but from a use of most other kinds of poisonous fish, the person is seized after a few hours with languor, heaviness, and faintness, succeeded by great restlessness, flushings in the face, giddiness in the head, heartburn, nausea, griping pains in the bowels, and a severe vomiting and purging. The burning which was felt at first only in the face and eyes, is at length extended over the whole body, but more particularly the palms of the hands and soles of the feet. With the heat of the skin, there is invariably a prickly sensation in the hands when immersed in cold water. In some cases the neck of the bladder, urethra, and sphincter ani are likewise affected with heat, and the patient experiences a difficulty of making water, together with a considerable degree of tenesmus." When poisonous fish have been eaten, our first object is to discharge them from the stomach and bowels by vomiting and purging; and to counteract the bad effects that follow: this seems best accomplished by spirituous liquors and strong cordials.

There have been several cases recorded of very dangerous effects from the use of the mussel, (*Mytilus edulis.*) In the month of June 1827, a considerable number of cases occurred at Leith, and an excellent account of the incident has been given by Dr. Combe of that place, in the Edinburgh Medical Journal. Two persons died, and about thirty cases occurred, with great uniformity of symptoms, but varying very much in severity; none, however, left any permanent bad effects. "The weak and aged suffered most, but no age from two to seventy was exempt from the effects. The mussels had been taken in various forms and various quantities. By one or two, they had been eaten raw; and these persons seemed to escape from their fatal effects only by the smaller number which they ate. Most of them got them boiled with salt, pepper, and other condiments; and eight or ten of the sufferers had made a hearty meal of them. None complained of any thing peculiar in the smell or taste of the animals, and none suffered immediately after taking them. In general, an hour or two elapsed, sometimes more, and then the bad effects consisted rather in uneasy feelings and debility than in any distress referable to the stomach. Some children suffered from eating only two or three, and one patient, a young and healthy man, only took five or six. In two or three hours, they complained of a slight tension at the stomach. One or two had heartburn, nausea, and vomiting, but these

were not general or lasting symptoms. They then complained of the prickly feeling of their hands, heat and constriction of the mouth and fauces, difficulty of swallowing and speaking freely; numbness about the mouth, gradually extending to the arms, with great debility of the lower limbs. The degree of muscular debility varied a good deal, but was an invariable symptom. In some, it merely prevented them from walking firmly, but in most of them it amounted to perfect inability to stand. While lying in bed, they could move their limbs with tolerable freedom; but on being raised to the perpendicular posture, they felt their limbs sink under them. In some the secretion of urine was suspended, in others it was free, but passed with pain and great effort. The action of the heart was feeble, the breathing unaffected, the face pale, expressive of much anxiety; the surface rather cold, and the mental faculties unimpaired. The practice adopted was uniform, and attended with evident good effects. In some, the stomach was emptied by an emetic, and a few discharged some of the undigested mussels. In others brisk laxatives were administered, and followed by stimuli, such as spirits, ammonia, or nitrous ether." The mussels which produced these poisonous effects were got solely from the bar at the dock-gates. This bar, which was formed of two beams of fir, had floated there for fifteen or twenty years, and when hauled up was found to be thickly incrusted with mussels, which being scraped off were thrown on the quay, and there found by the poor people who had suffered so severely. The wood was found to be perfectly sound. Large quantities of mussels had been procured from the walls of the dock, from which the water had been discharged for the purpose of its being cleaned, and of these mussels many people ate with impunity. The explanation of the facts is very difficult; and we cannot give any better account than by considering them as owing to a peculiar poison; it was not in consequence of the mussels being putrid, for they were perfectly fresh when eaten, and some of them were even living on the day subsequent to that on which the beam was placed on the quay. For other judicious remarks on this subject, and also for the appearances observed on the bodies of the two persons who died at Leith, we refer to the interesting paper of Dr. Combe. (*Edinburgh Medical and Surgical Journal, January* 1828.)

FISTULA. A name applied to a sore which runs some way under the skin, and discharges a thin matter from its sides, which are converted into secreting surfaces. A fistula may occur in any part of the body, but it is chiefly frequent and troublesome in the neighbourhood of the anus, where one or more of such sores run a long way under the surface, and penetrate within the gut. This is a very disagreeable, though not a dangerous affection, and people are naturally very anxious to get rid of it. The cure consists in making such an incision through the internal surfaces of the fistula and neighbouring substance, as shall induce a degree of inflammation, and so cause the sides to grow together, and obliterate the fistula. When the sore communicates with the gut, the surgeon must pass his finger into the gut, and use it for a director to introduce a cutting instrument, by which he is to lay open the whole extent of the fistula; and then by proper dressings to encourage such a suppuration as shall end in a union of the parts. The operation is not particularly dangerous or painful, but in unhealthy constitutions, as in those which have been broken down by intemperance, or in old people, there is such a degree of inflammation produced as to bring the patient into very great danger. Fistula is sometimes connected with diseases of the bladder and other neighbouring parts, and this adds to the inconvenience and danger. There are many diseases that may take place near the anus, that are apt to be dreaded by the ignorant as fistula, but the true fistula is as we have described it.

FISTULA LACRYMALIS. *See* WEEPING EYE.

FIXED AIR, the name given to carbonic acid by Dr. Black, its discoverer. *See* CARBONIC ACID.

FLANNEL, worn next the skin, is of great utility in a variety of cases. It gently stimulates the surface, keeps up an equal temperature, promotes perspiration, and absorbs the moisture as it is thrown out. It is useful in those who are predisposed to complaints in the chest, who easily catch cold, or who are of a consumptive tendency; it is of great benefit also to those who are rheumatic or gouty, and from the sympathy between the stomach and skin, dyspeptic ailments are benefited by it. To some persons the irritation produced by wearing flannel next the skin is quite intolerable, and such may substitute for it chamois leather. It is unnecessary to wear the flannel during the night, as it keeps up too great a degree of warmth; and is more likely to irritate the skin, from the increased sensibility of the latter during sleep. To some it may be necessary to wear flannel, covering the whole body, and having sleeves; to others, as those having lumbago or stomach complaints, a broad bandage or flannel round the body will perhaps be sufficient.

FLATULENCE, *or* WIND *in the* STOMACH *and* BOWELS. A troublesome symptom, occasioned by the extrication of air from the food when the digestion is in an unhealthy state. Sometimes the eructations are very offensive, having the smell of rotten eggs; this indicates very great derangement of the digestion. This is supposed to arise from the decomposition of animal matter, and has been relieved by the use of farinaceous diet. In general, wind arises from the fermentation of vegetable substances in the stomach and intestines, and is lessened by avoiding vegetables which are found to disagree with the patient. The wind makes its way both upwards and downwards, and often causes an uneasy feeling of distension in the stomach and bowels. It is to be permanently got rid of, only by restoring the digestion to a healthy state; but something may be done to palliate it when it is urgent. The medicines commonly called carminative, such as peppermint-water, or anise, or cardamoms, or ginger, may all be used to dispel flatulence, and this either in a fluid form or in substance. A little rhubarb and magnesia with ginger, taken in peppermint-water, is one of the most efficacious. Also a drop of the oil of peppermint on a bit of loaf sugar will have the like effect; or the pills of aloes with assafetida, two for a dose. Sometimes flatulence causes many uneasinesses, not so much from the distension it occasions, as from the great irritability of the stomach and intestines; and is relieved by medicines which calm this irritability, as opium or henbane, with small doses of ipecacuan.

FLOODING. A sudden and copious discharge of blood from the vagina. It may take place at any period of pregnancy, but it is most commonly applied to those discharges which take place immediately either before or after delivery. It is an occurrence of general and just alarm, and requires the most prompt and decided assistance. When it occurs at the early periods of pregnancy, it is a symptom of threatening miscarriage, and under the article ABORTION we have given a full statement of the measures proper to be pursued. When it happens shortly before delivery, it is most commonly owing to the after-birth being situated near the neck of the uterus, and when this begins to expand, some of the large vessels by which the after-birth is there attached, are broken, and pour out blood in great quantity. As the after-birth is the connecting substance between the mother and child, and as nearly the whole of the blood of the child is deposited in it, it is obvious that the child is exposed to the greatest hazard of bleeding to death, and that the mother also is in immediate danger of an irreparable loss of blood. If the woman be not come to the full time, we must try to suspend the ac-

tion of the uterus for some time, by enjoining the utmost quietness, by taking a little blood from the arm, or by giving opiates. If this does not succeed, or if the patient is at the full time, the only means of safety to the mother and to the child, (though to the child the probability of life is very small,) is to accelerate the delivery as much as possible; and the accomplishment of this is, of course, to be entrusted only to an experienced practitioner. When flooding occurs after delivery of the child, and before the after-birth has come away, this also is of dangerous tendency; and if it appears to go to too great an extent, is to be checked by getting the after-birth expelled; and for accomplishing this purpose, no rougher methods are to be used at first than very gentle rubbing of the belly with the hand, or soliciting the extrusion of the placenta, by pulling very tenderly at the cord. When the after-birth is away, the uterus, in general, contracts into a small bulk; and by so doing, shuts up the bleeding vessels, and puts a stop to the flooding. This contraction is to be assisted by again rubbing the abdomen, and putting a broad roller round the body to give a proper support and moderate pressure. Another and more alarming kind of flooding is that which happens after the womb has been completely emptied. Instead of the proper contraction of the womb, by which the waste of blood is prevented, it retains a large size, and numerous vessels continue to discharge their blood. The patient's ears ring, the head becomes giddy, she is insensible to surrounding objects, and it is only by the alarming medium of a fainting fit, that the flow of blood is stopped for a short time, but only to return again when the powers of life begin to rally a little. When the gentle methods of obtaining contraction of the womb do not succeed, (and there is little time to lose in making the attempt,) we must have recourse to such as are more suited to the impending danger, however rough they may appear. The abdomen of the patient is to be more strongly compressed, and cold water is to be suddenly dashed upon it in large quantities, or wet cloths to be laid upon it. If still we do not succeed in stopping the flow of blood, it will be necessary to introduce the hand into the uterus, and by gentle but skilful pressure to solicit the uterus to contract upon the hand; which is to be withdrawn with the uterus pressing it, or as it were expelling it, and closing behind it. In some cases of flooding, the mouth of the womb being closed, there is no appearance of blood externally, but it is not the less lost to the patient, as it is out of its proper vessels, and fills up the internal cavity of the uterus. The occurrence of this accident is known by the same constitutional symptoms as the former, by the dizziness, the fainting, and debility; and by the belly speedily rising to a size almost as large as before delivery. Means must be immediately taken to empty the womb of the clotted blood which fills it, and to induce contraction to stop any farther discharge. It is seldom that the womb can be properly emptied of that blood without the introduction of the hand. When the coagulated blood has been removed, the same means of inducing contraction, as above described, are to be resorted to. Sometimes the non-contraction of the uterus is owing to part of its fibres being seized with cramp, by which there is a contraction in the middle while the upper and lower parts are expanded, forming what is called the hour-glass contraction. To overcome this spasm, pretty large doses of opium are to be given, forty or fifty drops of the tincture, or a grain and a half of the solid opium repeated at a short interval, till it has been three times taken.

The management of the patient after the flooding has ceased, is of a very delicate and difficult nature. The powers of the constitution seem nearly quite exhausted; and to attempt recovering them by stimulants, would be attended with considerable hazard. The best cordial that can be given in the first instance, is a dose of laudanum to the extent of forty

or fifty drops, in a little weak spirits and water; but sometimes the debility and feeling of sinking are so urgent, that stronger stimulants must be had recourse to, as brandy or other spirits undiluted, or hartshorn with spirit of wine and a little water, or wine, either alone, or mixed with water. If the collapsed state is thus counteracted, and if sleep comes on, we may hope that the feeble pulse will acquire a firmer beat, and the exhausted strength be recruited by degrees. In the course of an hour or two, some nourishment of the simplest kind should be given, as a little calf's foot jelly dissolved in water, or a little panado with a small portion of wine, or very weak chicken broth; most particular care being taken, that the quantities given be very small and frequently repeated; and that there be nothing given indigestible or over-seasoned. The patient must on no account be allowed to rise up hastily or to make any exertion; every occasion of alarm or agitation should be carefully kept from her; her diet must be light and nutritive, gradually increasing as the powers of digestion recruit; and a little wine and bark may be given. Much injury is often done to the female constitution by flooding; and in many instances the debility and pallid countenance remain till the end of life, even though that is protracted for many years. It is, therefore, an accident that should in every case be assiduously guarded against. Even after a common and easy delivery, there should be as little disturbance of the woman as possible for many hours; no shifting of her dress beyond what is absolutely necessary for her comfort; and even a degree of discomfort, which at another time would not be tolerated, must now be suffered to remain; and rather some dry clothes placed next the woman, than any part of her dress be removed, at the expense of her own exertions in getting up and assisting in her adjustment.

FLOWERS. A popular name for the monthly discharge of women. *See* MONTHLY DISCHARGE.

FLOWERS OF SULPHUR or BRIMSTONE; the soft light form into which sulphur is sublimed. *See* SULPHUR.

FLUCTUATION. The perceptible motion communicated to any collection of purulent matter, or other kind of fluid, by applying some of the fingers of each hand, at a certain distance from each other, to the surface of the tumour, and pressing with them alternately in such a manner, that the fingers of one hand are to be employed in pressing, while those of the other hand remain lightly placed on another part of the swelling. This pressure or tapping, when skilfully applied, communicates a sensation to the fingers of the surgeon, which is one of the principal means by which he is enabled to discover the presence of fluid, in a great variety of cases. When the collection of fluid is very deeply situated, the fluctuation is frequently very obscure, and sometimes not at all distinguishable. In this circumstance, the presence of the fluid is to be ascertained by the consideration of other symptoms. (COOPER'S *Surgical Dictionary*.)

FLUX. *See* DYSENTERY.

FLY-POWDER, the protoxide of arsenic, is a familiar poison in France and Germany. It ought to be a fine greyish-black powder, as formed by exposing powdered arsenic for a long time to the air; but it also frequently contains fragments of the metal. It is usually considered by chemists to be a mixture of metallic arsenic and its white oxide. It is acted on by water, the white oxide being found before long in solution by its proper tests. (CHRISTISON *on Poisons*.) Of course, this substance is possessed of all the poisonous and dangerous qualities of arsenic. *See* ARSENIC.

FŒTUS. The young of animals while in the womb. The uterine fœtus is contained in a bag composed of different membranes, which is styled the ovum. This ovum, as soon as it becomes visible, appears like a small vesicle, attached to some part of the uterus, generally to its upper part; and all the organs of which it con-

sists, seem to be confusedly blended. By degrees they appear more distinct, and in the advanced periods we observe the membranes called the amnios, the chorion, and the decidua. The decidua lines the inner surface of the uterus, and is reflected over the ovum; the amnios is next to the fœtus, and the chorion lies between the other two membranes. In the early periods of gestation, the bag or external parts of the conception are large in proportion to the fœtus, but afterwards they are in a smaller ratio, the fœtus increasing more rapidly than its contents and accompaniments; the latter seldom become more bulky after the seventh month. The fœtus is for a time invisible, on account of its minuteness and transparency. A fœtus of four weeks is nearly the size of a common fly; soft, mucilaginous, and in appearance suspended by the belly; its bowels covered by a transparent membrane. "At six weeks, it is of a somewhat firmer consistence, nearly the size of a small bee; the extremities then begin to shoot out. At three months, its shape is tolerably distinct, and it is about three inches long. At four, five, and six months, it is five, near seven, and near nine inches respectively. In the successive months, it increases in length to ten, fifteen, and twenty, or twenty-two inches, though varying in different women, and in different births. Indeed, all these measurements are rather approximations than accurate representations. Between the chorion and amnios in the early months, a collection of gelatinous matter is found; and in the latter months, this space is occasionally filled by a serous fluid styled the false waters; so that every discharge of water in pregnant women is not dangerous. If not attended with a discharge of blood it is apparently harmless." The navel string, which is composed of two arteries and a vein, proceeds from the navel of the fœtus, and passes into the placenta, a thick spongy substance, which is most commonly attached to the fundus or upper part of the womb. It consists of two parts, one of which contains numerous blood-vessels that can be injected exclusively from the arteries of the mother. The remaining part of the placenta is an organ of the fœtus, and the vessels can be injected only from the umbilical cord. The two arteries which form part of this umbilical cord are a continuation of the hypogastric arteries of the fœtus; and they are thought to convey to the placenta the blood which has circulated in the child, that some change may be produced in it, analogous to the change produced on the venous blood of the adult by respiration. Numerous vessels take up the purified blood from the placenta, and carry it into the umbilical vein, which transmits it to the liver, in which organ one half of the whole mass circulates. The remainder of the blood is carried by a vessel called the *ductus venosus* to the *vena cava*, or large vein terminating in the right auricle of the heart, where also the blood, after having circulated through the liver, arrives. As the lungs are not yet expanded by air, they cannot receive the whole of the blood, and one part passes through the *foramen ovale*, an aperture in the partition which divides the right from the left side of the heart. The rest proceeds to the right ventricle; and of this portion, only a part enters the pulmonary artery to go to the lungs, the rest being conveyed directly to the aorta, by a duct called the *ductus arteriosus*. Thus the entire mass of fluids is conveyed to the aorta, to be circulated through the whole machine. It is difficult to explain how the fœtus is nourished. The blood probably undergoes some change in the mother, which fits it for furnishing materials for growth and nourishment when it reaches the fœtus.

There are some other peculiarities of the fœtus which may be mentioned. The head is very large in proportion to the rest of the body; the bones of the head are soft and yielding; the sutures not yet formed, and a triangular space is left at the union of the coronal and sagittal sutures. This is what nurses call the *opening* of the head. The bones of the

trunk, the extremities, and the articulations are very flexible. All the protuberances of the bones are distinct portions, united by cartilage to the bone of which they are afterwards to form a part. The brain and spinal marrow, the glands, and the sanguiferous system are larger in proportion than in the adult. The cavity of the chest is less than it is after respiration has commenced; the lungs are smaller, more compact, and of a red colour like the liver. The belly is disproportionately large, and the extremities particularly small.

When the child is born, and respiration has begun, the peculiarities of the fœtus begin to disappear. In consequence of the expansion of the lungs, a larger portion of blood is carried into that organ; the foramen ovale soon closes, and the ductus arteriosus is lessened, and gradually contracted into a ligament; while the whole of the blood brought by the veins is now carried through the lungs. When the supply from the umbilical cord is cut off, the ductus venosus contracts in the same way.

It seems now to be admitted, except by the very credulous and ignorant, that the imagination of the mother has no power over the infant in her womb, either to alter its structure, to mutilate its limbs, or to impress any mark on its surface. A few remarkable coincidences have certainly happened, but many falsehoods and misrepresentations have given currency to the stories which have been adduced, in proof of the influence of the mother's imagination on the fœtus. But honest inquiry and sound philosophy alike put a negative on the assertion. But though the imagination and longings of the mother cannot affect the fœtus, her diseases have done so. In fever, we see it possible from the increased heat of the blood, which may affect the irritable frame of the fœtus; and the matter of small-pox which pervades all the fluids may be absorbed from the maternal part of the afterbirth, and conveyed to the embryo.

Sometimes the fœtus is lodged, and grows, not in the womb, but in some of its appendages, and even in the cavity of the abdomen. Such extra-uterine conceptions are generally fatal to the mother; but in some instances, when the fœtus dies, adhesions having taken place to the sides of the belly, an abscess is formed, and the child comes away in parts, the mother eventually getting well.

FOMENTATION. The application of heat, generally accompanied with moisture, to any part of the body, for medicinal purposes. Thus in swellings of a part, we *foment* it with chamomile flowers, boiled, and wrapped in flannel; or in spasms of the bowels we apply fomentations by means of cloths dipped in hot water. Sometimes clysters are given warm, and in large quantity, with a view of acting as an internal fomentation. Sometimes a more penetrating or stimulating substance is added to increase the power of the fomentation, as brandy, camphor, or ammonia.

FOMITES. The matter of the contagion of several diseases, as the plague, and typhus fever, is well known to adhere to various substances, especially wool and cotton, and thus to be carried to a great distance in a very concentrated state. Such substances are called *fomites*. Instances have been known, of persons being struck dead while opening a bale of cotton, which had come from a place infested with the plague. Hence the necessity of thoroughly cleaning every thing connected with the house, and the bed and body-clothes of patients who have fever, and of burning every thing worthless, or that cannot be completely cleaned. *See* CONTAGION.

FOOD. *See* DIET

FOWLS. There are many different kinds of fowls used as articles of food, and these vary much in their different degrees of nourishment, digestibility, and the stimulus they give to the system. Many of them, as the goose, duck, &c. contain much oily matter, which renders them very nutritive, but of difficult digestion; while the whiter parts of the common domestic fowls, chickens, tur-

keys, &c. contain less fatty matter, but are still not so digestible as the parts of game, partridges, grouse, &c. Wild birds, however, are more heating than the others. We are to consider the state of the patient, and the effect intended, when we direct any particular kind of fowl for diet. The broth made from the common dunghill fowl, with a little rice, is an excellent article for convalescents from various diseases, and for women in childbed, when animal food is first to be ventured upon.

FOXGLOVE, *Digitalis purpurea.* A plant which grows in many places of Great Britain, producing purple or white bell-shaped flowers. Foxglove furnishes a medicine of great celebrity, and possessed of remarkable powers on the human body. The part of the plant which is used, is the dried leaves, either in the form of powder, of tincture, infusion, or decoction. On account of their great hazard and uncertainty, we rarely prescribe either the infusion or decoction, but find the powder and tincture more manageable. The effects of foxglove are those of a sedative and a diuretic. As a sedative, it seems better entitled to that name than any other medicine which has received it; as it has little appearance of previously stimulating, and as it is not followed by the stupifying effects common to opium and other narcotics. Indeed, at one time, physicians had high hopes that digitalis was to prove a specific in consumption, and to bring down the pulse and diminish the hectic excitement with unerring certainty. Though it does not do this, yet when the pulse is full, hard, and frequent, it diminishes the intensity of all these states, and reduces the number of beats in a wonderful manner, at the same time rendering the pulse intermitting. The pulse has been known to fall in the course of six hours from 130 beats to 60 in a minute; and in a hectic patient, it fell from 125 to 45 beats in the minute, in the course of forty-eight hours. With this reduction of the hardness, fulness, and frequency of the pulse, the remarkable circumstance attends, that if the patient gets up suddenly, the pulse becomes alarmingly frequent, he is seized with fainting fits, and sometimes dies very suddenly. Hence the necessity of extreme caution in the exhibition of this powerful substance; hence the necessity of the utmost vigilance on the part of the medical attendant, lest, before he is aware, there be such a quantity of digitalis accumulated in the system, (or, what is the same, lest the effects of one dose be so backed by following ones,) as to give rise to the fatal result above specified. What has appeared a very small quantity indeed, has proved fatal to some; and the symptoms indicating an over-dose are these: sickness of the most dreadfully distressing kind, vomiting, purging, cold sweats, great prostration of strength, faintings, convulsions, and death. When these alarming symptoms have come on, strong stimulants must be given, wine, spirits, or ether, or the volatile tincture of valerian; external warmth must be applied to the extremities, and a blister to the pit of the stomach. The remarkable effect of digitalis in diminishing the action of the heart and arteries, suggests the inquiry, whether, in inflammatory diseases, its powers might not be so managed as to render large bleedings unnecessary. The answer to this must be in the negative. No judicious or candid person will ever say, that digitalis will cure acute pleurisy, or phrenzy, or rheumatism. The abstraction of blood by the lancet is a means of cure in such diseases, sanctioned and confirmed by the uniform experience of ages; and whatever auxiliaries it may admit, it must never be superseded by any of them. After copious bleedings in acute diseases, digitalis may be used to lessen still farther the action of the circulating system, but we must never trust to it alone.

As a diuretic, foxglove has been celebrated more particularly for its effects in dropsy of the chest, than in any other affection. Perhaps this may be owing to the circumstance, that many of the symp-

toms believed to be characteristic of water in the chest, are connected with some disease of the heart and great vessels; and as digitalis certainly does some good in such diseases, it is thought to have done good in the dropsy of the chest. Digitalis, when used as a diuretic, should be combined with other diuretics, as squill, or the spirit of nitrous ether.

With respect to the doses of foxglove: at first, we are to give, of the powdered leaves, one grain in the form of pills twice a-day, increasing the dose gradually by a quarter of a grain each time, till some effect is produced; recollecting that if any effect is long of manifesting itself, there is a possibility of the medicine accumulating in the system, and at last showing its alarming effects with violent rapidity. Of the tincture, ten drops twice a-day are enough to begin with, increasing the dose gradually by four drops at a time, or directing ten drops to be taken three times a-day. The best way is to give the tincture carefully dropped in cold water, or to join equal parts of the tincture of foxglove and of the compound spirit of lavender, and to order twenty drops of the mixture in water. When given as a diuretic, we may add a drachm of the tincture to an ounce of the spirit of nitrous ether, with five ounces of cinnamon or peppermint-water, and give a table-spoonful of this every three hours.

The following remarks of Mr. Brande are well worthy of being particularly attended to. "It is sometimes customary, in pharmaceutical laboratories, to leave tinctures upon the dregs, after they have stood a due time, and gradually to pour off the clear part for use; the dregs are afterwards pressed out, and the last portion of tincture acquires, by this careless proceeding, double the strength of the first. A person suffering under water in the chest, who had been in the habit of taking forty drops of tincture of digitalis every night, went from home without his medicine, and was obliged to send to an apothecary in the country for an ounce of the tincture, of which he took the accustomed dose; its effects were much more violent than usual, and he died, exhausted by repeated faintings, in the morning. Very particular inquiries were made, respecting the quality of the tincture, when it appeared that the leaves had been shaken out of the bottom of the bottle in nearly a dry state, since an ounce of the tincture was with much difficulty squeezed out of them. Here, therefore, the strength of the tincture was not only increased by long standing, but probably very greatly augmented by evaporation; and there is little doubt that the patient died of the over-dose, and not of his disease. Doses of digitalis are borne by persons who have long used it, which could not have been given to them with impunity in the first instance. Hence persons often do themselves mischief by resuming their medicine, after some interval, in the same doses they had previously used it. This observation particularly applies to patients who undertake the management of their own cases, and who erroneously suppose that a dose once taken may always with impunity be repeated."

Upon the whole, foxglove is one of our most powerful instruments; but it is one which must not be tampered with, nor trusted in rash or unskilful hands.

FRACTURE. A broken bone is said to be *fractured*. Fractures are either simple or compound. A fracture is termed simple when the bone alone is broken, without any accompanying wound of the skin, muscles, or soft parts; and it is called compound, either when the same violence which has broken the bone has injured the soft parts, or the bone itself has been pushed through any of them. A fracture being compound, adds very much to its danger; and the degree of danger is to be estimated by the violence which inflicts the injury, and the extent or importance of the soft parts injured. When a person has, either by a fall, a bruise, or any other accident, broken a bone, great care should be taken in re-

moving him from the place of the accident; he should be carried in the easiest manner possible, and this seems to be by the strength of men, while the patient is lying on a flat board. A carriage, or even a litter with springs, is not so good. The patient, unless under the influence of drunkenness or insensibility, generally finds out the position which is easiest for himself. The plan of cure in simple fractures, is to place the injured limb in such a way that the broken ends of the bones may be kept as near each other as possible; a certain matter is thrown out from the ends of the bone, which gradually hardens, and the bone becomes as strong as before. To keep the limb in the proper position, it is to be firmly bound with splints, flat pieces of wood or iron, lined with cotton or quilt to keep the soft parts from being chafed, and fastened with tape or rollers. When the fracture is compound, the state of the soft parts requires attention. If there is much crushing of the bone, so that it is broken down as it were into fragments, or when there is much laceration of the soft parts, it is very unlikely that the cure will go on well; and it is generally necessary at once to amputate the limb, in order to preserve the life. When the surgeon sees this to be absolutely necessary, it is better to perform the operation without delay, as there is a likelihood of fever and other symptoms of great constitutional irritation soon coming on, which will probably render it impossible to perform the operation. It may appear a very harsh and rapid mode of proceeding, to propose at once cutting off a limb which has been subjected to a severe accident; but it affords the only probable means of preserving life, and in that view it is really merciful. If the compound fracture have a sharp projection of bone, pushing through the skin, it will be impossible to place the bone in a favourable position for healing, till this impediment is removed by the bone-nippers. A blood-vessel may be wounded, and this must be secured either at the place of the accident or nearer the heart, and the blood cleaned out from the wound; the limb is then to be secured in the usual way.

We do not think it necessary to detail the symptoms and cure of particular fractures, but shall mention a few circumstances respecting fractures of the skull. Every injury of the head, more especially those inflicted with such violence as to fracture the skull, is to be considered as of an alarming nature; yet the mere circumstance of a fracture, and even a pretty extensive one, is not to be considered as the most formidable concomitant. Unless the soft parts are very much torn, there may be a long fissure of the bones of the skull, without much danger; but if there is not only fracture, but also depression, or beating in of the skull upon the brain, then the danger is unquestionably more urgent. *See* SKULL *and* TREPAN.

FRICTION. It is useful, in many cases, to rub diseased parts of the body with the hand or with the flesh-brush. Sometimes liniments or embrocations are rubbed upon such parts; sometimes nothing is interposed between the hand and the skin. In palsy and in rheumatism, stimulant applications are used, as harts-horn and oil, camphorated oil, turpentine, oil of amber, or cajeput oil. In swellings of the glands, or in the thickening of the cellular substance which remains after an abscess, gentle rubbing with oily matters contributes to discuss them. In œdema or watery swelling of the limbs, rubbing with the hand in the direction of the returning veins and lymphatics assists their action. In white swelling of the knee-joint, a cure has been accomplished by rubbing, alone. It must be vigorous and long continued; and in some towns, persons gain a livelihood by undertaking this operation. A little flour is put in the palms of the hands, and the rubbing is continued for an hour or two at a time. Medicines are introduced into the system by friction, of which we have a frequent example in the rubbing in of mercury in the form of blue ointment.

FRUITS are much used as an article of luxury; and from the effects they are too frequently seen to produce, they would seem to be by no means of a salutary nature. Looseness, vomiting, indigestion, and even inflammation of the bowels, have been seen evidently to proceed from the use of various fruits. Yet it is pretty certain that the fault has lain not with the fruit, but with the consumer. When fruit is eaten in large quantity, and in an unripe state, when it is forced into the stomach, already loaded with a plentiful dinner of soup, meat, pudding, and all the items of a luxurious table, there is nothing wonderful in the subsequent intestine war. But when fruit is taken in moderation, of a proper quality, and at proper seasons, no bad effects are to be dreaded. Fruits are evidently useful, and they are kindly sent at the very season, when the system, heated and excited by the warmth of summer, stands in need of something cooling and laxative to be taken with the food.

The fruits in most common use may be classed under the heads of stone-fruits, the apple kind, berries, (without affecting botanical accuracy in the use of this term,) and farinaceous fruits. The stone-fruits are those which are of most difficult digestion. *Plums* and *cherries* are particularly so. The ripe *peach* is both delicate in its flavour and easily digestible; the *apricot* is also very wholesome; but the *nectarine* is liable to disagree with some stomachs. The fruits of the *apple* kind are somewhat firm in their texture, and therefore rather indigestible, and liable to be detained in the stomach. *Pears* are rather more allowable, as their texture is softer. The white skin of the *orange* should be carefully rejected, but the inner pulp is grateful to all stomachs, whether in health or sickness. The fruits of the berry kind are the most wholesome of all. The *strawberry* or *raspberry* are particularly good; the *grape* is cooling and laxative, but the husks and seeds are to be rejected; the *gooseberry* is not so digestible, especially if the skin be swallowed. It is only the pulp of these fruits that is digested; the seeds always pass through the body undigested, unless they be chewed. Other berries are generally baked in pies, but the pastry should be sparingly used. The *melon*, a farinaceous fruit, is almost sure to disagree with weak stomachs; and when eaten after dinner, always requires abundance of salt, pepper, ginger, or other condiment to be eaten with it. Many fruits, otherwise unsafe, are much improved by cooking. Baked apples are an excellent article of food, and may even be of benefit to dyspeptic patients. Dried fruits are generally esteemed very safe, but they are apt to run into fermentation from the quantity of sugar which they contain.

FUMIGATION. The method of applying the smoke or vapour of certain substances for salutary or medicinal purposes. Some preparations of mercury have been burned, and patients have been exposed to their fumes, for the purpose of producing on the body the peculiar action of mercury; and fumigation is much employed to destroy the contagious matter of several diseases. One of the most beneficial instances of this, is the employment of the fumes of nitric or muriatic acid, to destroy the contagion of fever. This is done by pouring sulphuric acid on saltpetre; the sulphuric acid combines with the potash of the saltpetre, and the nitric acid fumes thoroughly mixing with the air, destroys the contagious matter of which it is the vehicle. The best way to fill the chamber, the ward, or the ship, where contagion is suspected, is to place a number of saucers in different parts of the room, to put saltpetre in each of them, and to pour on the sulphuric acid. The doors and windows should be shut for some time, and then a current of fresh air admitted. Another gas which has been employed to destroy contagion, is the muriatic acid gas, or vapour from sea-salt. This is to be extracted from sea-salt by nearly the same process, pouring sulphuric acid upon it; the vapour which rises is probably equally effectual, but it

is more irritating and offensive to the lungs of those who are exposed to it. Fumigation with sulphur may also be practised. The clothes of those who have been ill of fever should be carefully fumigated, and the walls of their apartment, and the furniture, should be completely exposed to the disinfecting vapour. In the small-pox, there is a most peculiar odour in the apartments of the sick, which continues many weeks or months after their recovery; and the contagion of fever, though less obvious to the senses, may reasonably be supposed to lurk as long, if not carefully destroyed. The sprinkling of the sick-chamber with heated vinegar, or throwing it upon hot coals, though it may not have the power of destroying contagion, is nevertheless a very good practice, as it encourages ventilation, is refreshing to the sick, and gives confidence to the necessary attendants.

G

GAL

GALBANUM. A gum obtained from the *Bubon Galbanum*, imported from Turkey and the East Indies; supposed to agree in expectorant virtues with ammoniacum, but not much used. Externally, gum galbanum is applied to promote the suppuration of inflammatory and indolent tumours, and also as a stimulating plaster.

GALL. The fluid secreted by the liver. *See* BILE.

GALL-BLADDER. A membranous bag attached to the concave surface of the liver, into which part of the gall flows, and becomes a little thickened, before it passes into the intestines by the common gall-duct. It is in the gall-bladder that gall-stones sometimes form.

GALL-NUTS. Excrescences upon a kind of oak common in Asia Minor, which are produced by the puncture of an insect to deposit an egg. When the young insect comes to maturity, it eats its way out of the excrescence, which is from a quarter to an inch in diameter; hence gall-nuts are generally found with a hole in them. They abound in astringent matter, or tannin; a decoction of them may be used as a gargle, and one part of finely powdered galls added to eight parts of any simple cerate or ointment, is a good application for piles.

GAL

GALL-SICKNESS. A popular name for the remittent fever which takes place in marshy countries, derived from the very prominent symptom of the discharge of great quantities of bile. It is this fever that is so common in certain parts of the Netherlands, and which was so destructive to our troops at Walcheren. *See* FEVER, REMITTENT.

GALL-STONES. Concretions which form in the gall-bladder, and by their getting into the passage leading from it to the intestines, prevent the bile from getting into them; hence jaundice is frequently produced. These gall-stones, when the obstruction is overcome, get down into the bowels, and are discharged by stool; then the disease abates, provided there is no other cause for it.

GALVANISM is a species of electricity, and derives its name from Galvani, Professor of Anatomy at Bologna, one of its earliest cultivators. With the view of proving the truth of some opinions respecting muscular motion, Galvani suspended a dead frog, by means of a metallic hook, on an iron railing, and he found that at certain times, convulsive motions were excited in the limbs of the animal. "When also the nerve of the extremity was covered with a metallic leaf, and the leg laid on another piece, on establishing

a communication between them by means of wire, the convulsions become stronger. From the different experiments which Galvani performed, he was inclined to suppose that the action was the same as takes place in electrical animals, as the torpedo or gymnotus electricus, and that the metal or metals served merely as conductors. Hence he gave it the name of animal electricity. Volta gave a different view of the subject. He supposed that it was merely common electricity evolved by the metals; the animal being the conductor, and showing its effects. He has shown, for instance, that particular sensations are excited in the human body by a similar adjustment. If we take two pieces of metal, of different kinds, as zinc and silver, and apply one above, the other beneath the tongue, no particular sensation is excited; but if they be made to touch each other, a peculiar metallic taste is perceptible. When we put the zinc between the upper lip and gum, and the silver between the under lip and gum, and bring them together, a flash of light darts across the eyes, provided the experiment be performed in the dark. It occurred to Volta, that the convulsions might be greater by using more pieces of metal. He accordingly took a number of plates of zinc and silver, and arranged them in pairs, putting moist card between each pair, and following the same order throughout, as zinc, silver, card; zinc, silver, card, &c. &c. When the legs were touched by means of wires, the effects were much greater than when only two pieces were used; and he also found that they were invariably in proportion to the number, fully proving the truth of his opinion, that the electricity was given out by the metals, and not by the animal. The apparatus above described is termed a Voltaic pile. Another apparatus for exhibiting galvanism was contrived by Mr. Cruickshank. It consists of a wooden trough, in the sides of which, grooves are cut, at about the distance of a quarter or half an inch from each other, according to its size; and into which are placed a plate of copper and zinc soldered together, following the same arrangement as in the construction of the pile, copper, zinc; copper, zinc, &c. This is called the galvanic battery. It is not a matter of indifference what metals we employ in constructing a battery; they must possess different powers of oxidation, or of being acted on by acids. One must be easily affected; while, the more the other resists their action, the better. For the former, zinc is generally used; copper, which is not easily acted upon, answers well enough for the latter. Different liquids are used for the excitation of galvanism. The best are the acids, and the nitric is commonly preferred; it is diluted with twenty or thirty parts of water. When we wish the galvanism to be strong, we rather use a large battery than increase the strength of the acid, which would act too powerfully on the plates, and destroy them." This is not the place to detail the astonishing chemical effects produced when the opposite ends of the battery are made to communicate by means of a conductor. If the wires are terminated by charcoal, and brought into contact, a brilliant light is produced, and this even under water. Galvanism produces an intense heat, sufficient to ignite and fuse the hardest metals, and even the most refractory earths. "Galvanism is a most powerful agent in causing decomposition. By increasing the strength of the battery, substances held together by the most powerful affinity are easily separated. We have thus been enabled to ascertain the composition of some, till then reckoned simple; and new bodies have also, by its aid, been discovered, which have themselves proved powerful means of analysis. About the beginning of this century, Sir Humphry Davy subjected a number of substances to the action of a powerful battery, by which he discovered the compound nature of many; and illustrated, by numerous instances, the chemical changes produced by this wonderful agent.

"The sensations excited on the human body by the battery are very peculiar.

If a ball be placed at each end, and the hands, after being wetted, are put on them, there is a thrilling in the fingers and arms, which becomes painful, if the battery be large; at the same time, convulsions are excited. The greater the extent of moistened surface of the hands, the more powerful are the effects. Galvanism has been employed in the cure of diseases, as palsy, rheumatism, deafness, involuntary contraction of the muscles, asthma, and some others; and it has been recommended in cases of suspended animation. The method of applying it is very simple. The part to be subjected to its influence is wetted with a solution of salt, or with very much diluted muriatic acid, and having tied a ball to each wire, they are to be applied at the same time to the moistened skin; the person holding them having on gloves, to prevent the transmission of the influence through his body. In many respects, galvanism is preferable to electricity. The apparatus is less liable to injury; besides, we are altogether independent of the weather, which is often a bar to the use of an electric machine." (Dr. FYFE's *Elements of Chemistry.*)

"Galvanism," says Dr. Parr, "has been employed like electricity in discussing indolent tumours, and in cataracts, but with no very marked or decided success. A few boasted cures have raised our expectations; but the little permanency of the benefit received, has again depressed our sanguine hopes. After repeated experiments about the head, inflammation about the eyes, a catarrhal inflammation of the membrane lining the nose, an insensibility of the organ of taste or vertigo have followed; and galvanism has been undoubtedly injurious where there was considerable irritability. On the whole, then, we have not yet received very encouraging accounts of the success of galvanism in diseases, and we fear that we must resign it, with electricity, as a remedy that promises to be beneficial, but whose advantages have not yet answered the flattering expectations first raised."

GAMBOGE. A gum resin brought from the East Indies, obtained from the *Stalagmitis cambogioides.* It is of a bright yellow colour, has no smell and little taste. It acts strongly on the bowels, not only evacuating them of feculent matter, but occasioning the discharge of much watery fluid; hence it is reckoned a drastic and hydragogue cathartic: and in certain cases of dropsy, either alone or combined with other purgatives, it occasions very copious watery stools. The dose of this active substance, when no other purgative is taken along with it, is from two to four grains of the powder, taken in a little syrup or gruel, with a grain or two of aromatic powder. Gamboge is apt to cause vomiting; but if it does not, it clears the bowels very effectually. When there is much torpor in the system, as in apoplectic cases and other diseases of the head, a strong purge, composed of six grains of gamboge, ten of aloes, and as much jalap, will have a good effect in opening the bowels, and relieving the stupor. One grain of gamboge with two of calomel may be given in the obstinate costiveness of children.

GANGLION, in anatomy, means a little knot found in certain parts of the nervous system. In surgery, it is a bunion, or hardened growth on the surface of a tendon. When it happens on any of the tendons of the foot, it is painful and troublesome like a corn. The best treatment is to rub them frequently with some stimulating application, or to put a small blister over them; and when it is healed, to apply a piece of sheet lead, and to make firm and continued pressure.

GANGRENE. *See* MORTIFICATION.

GARGLE. A wash for the mouth and throat. This is highly useful and necessary in many diseases of these parts. In the common inflammatory sore throat, astringent gargles should be used at the very commencement, and in many cases a threatened sore throat is prevented by their timely use. They may be made of vinegar and water sweetened with honey or sugar; or of diluted sulphuric acid and

water, or the infusion of red rose leaves, into which some drops of sulphuric acid have been poured. This makes a very elegant and useful gargle. Hartshorn much diluted may be used, or Port wine, or strong spirits. The inflammation of the tonsils is generally of that kind that requires astringent and stimulant applications. In the ulcerated and putrid sore throat which accompanies scarlet fever, the gargles must be of a very stimulant nature. An infusion of cayenne pepper, with vinegar, is to be frequently employed as a gargle; it is made by taking a table-spoonful of cayenne pepper, and a like quantity of common salt, infusing them in a pint of boiling water, then straining the liquor, and adding half a pint of vinegar. Much of the benefit of a gargle is derived from its being used frequently, and the patient should be encouraged to do so, notwithstanding the temporary inconvenience it puts him to.

GARLICK, *Allium sativum*. A plant whose root consists of five or six small bulbs called cloves, inclosed in one common membranous root, but which can be easily separated from each other. It has a strong, offensive, and penetrating smell, and a very acrid taste. Mr. Brande says, that if it is used with more judgment than belongs to ordinary cooks, garlic improves the flavour of a numerous class of spices, but entirely spoils them if added in such proportions as to become prominent. It is sometimes used by the lower classes as a seasoning. It is of little use in medicine. Like numerous other substances, it has been thought to cure the ague; and it is sometimes employed to heighten the stimulant quality of some poultices. Taken moderately, it may promote digestion, but in excess it is said to produce flatulence, heat, thirst; and to occasion a discharge of blood from the vessels near the anus.

GAS. An elastic fluid which is not condensed by the application of cold. The bodies of this class are numerous and important, both in chemistry and the arts; but as applied to the cure of diseases, though at one time much was hoped from directing patients to breathe certain kinds of airs, the gases are not of much consequence. The very ingenious application which has been made of certain inflammable gases for the purpose of lighting the streets, public places, and interior of houses, renders it necessary to say a little respecting their effects on the human body. As they are introduced into apartments, they must necessarily enter the lungs of the inhabitants either before or after being burned, and being burned in a limited space, they must have considerable influence on those who breathe them. The gas most commonly burned is that called carburetted hydrogen, a poisonous gas, which, even when diluted, has bad effects on the nervous system; and pains in the head, nausea, and languor have been known to occur in persons who had inhaled this gas. Probably, however, they were delicate subjects, as multitudes daily inhale this gas in shops and houses, without any bad effects.

GASTRIC JUICE. A fluid secreted by the exhaling arteries of the stomach; one of the most important agents in digestion. It is a most powerful solvent; and aided by the heat, the motion, and other concomitant circumstances, it reduces the aliment swallowed to a soft uniform pulp. Its quantity is considerable, and is increased, at the time it is wanted, by the stimulus of the food. After death it corrodes the coats of the stomach itself. The gastric juice has been thought likely to cure dyspepsia and intermittent fever, and to do good when applied to scrofulous ulcers; but the difficulty of procuring a quantity of it, and the disgusting circumstance of swallowing such a fluid, must render it very unlikely to be applied to the purposes of medicine.

GASTRITIS. *See* STOMACH, *Inflammation of*.

GELATINE, or animal jelly, is an abundant ingredient of the animal body, both of its fluid, and hard and solid parts. By long continued boiling, gelatine is procured from the skin, the membranes,

the gristle, and even from the bones. When this solution cools, it concretes into the well known, tremulous, half-transparent substance called jelly, which forms a light, easily digestible, and nutritious food. With this jelly can be combined, by good housewives, a little ale, wine, or spices, which both add to its nutritious qualities, and give it a flavour agreeable to the palate; rendering it also lighter for the stomach. This is a good form of giving nourishment to invalids and convalescents. Jelly may be dissolved in a little warm water and used as a drink, or taken cold and unmixed; or if this is thought unadvisable, it may be dissolved by heat and taken without any addition. Gelatine is most abundant in the bodies of young animals; hence it manifests itself on the cooling of lamb, veal, and the like.

GENTIAN, *Gentiana lutea.* A plant abundant in the Alps, and in the mountainous forests of Germany. The root is used in medicine; it is of an intensely bitter taste, accompanied by a slight sweetness, and is one of the best bitters we can employ. It may be given in the form of tincture or infusion; and according to the state of the stomach and bowels which we wish to rectify, it may be combined with magnesia and other absorbents; or with laxative medicines. Of the infusion of gentian, from one ounce to four may be taken twice a-day; or a tea-spoonful of the tincture in a glass of cold water. Gentian is an excellent tonic and bitter, and has not the astringency which renders some other bitters inconvenient. There is an extract of gentian, but it is less used than the other forms mentioned above. An extremely bitter spirit is distilled from gentian, which is highly relished by the common people of Switzerland.

GESTATION signifies the exercise given to the body by foreign means, while itself seems to be at rest. The principal modes of gestation are riding in a carriage or on horseback, being carried in a litter, sailing, or swinging either in a suspended seat, or on an elastic board. For the different kinds of exercise and gestation, and some diseases in which gestation is useful, we refer to Exercise, Consumption, Stomach Complaints, &c.

GESTATION *or* Pregnancy is the period during which a woman carries the fœtus, from conception to the time of its birth. *See* Pregnancy.

GIDDINESS, *Vertigo.* An affection of the head in which the patient is unable to direct his motions, from the apparent unsteadiness of external objects. It is accompanied with dimness and unsteadiness of sight, with sounding in the ears, and other disagreeable sensations referred to the head. It is an attendant on various morbid affections, in some of which it indicates great danger; and in others the mere unpleasantness of the feeling is the worst circumstance, as it only shows a diseased action of some other part not immediately necessary to life. In fever, when there is giddiness, it is the mark of considerable tendency to the head, and generally is followed by delirium; and in this case, the practitioner is to be guided by circumstances, and to use his best judgment whether to pay particular attention to the head-symptoms, or to attend to the general progress and character of the disease. In inflammation of the brain, the vertigo is bad itself, and the forerunner of increased excitement; and is to be treated boldly and decidedly by copious blood-letting, by purging, and the application of cold to the head. Vertigo is a very frequent denouncer of apoplexy and palsy, and should be regarded by the patient as a warning to take instant precautions against the impending danger. In affections of the stomach, vertigo is a most distressing symptom; but when we can be assured that the stomach only, or its functions are deranged, we need not regard the affection of the head as an object of great alarm. In indigestion, accompanied by what is called sick headach, vertigo is one of the most urgent of the symptoms; and is to be treated by calomel or other purges, with a view to relieve the sto-

mach by carrying the offensive matters downwards.

GIN, Geneva, or Hollands. An ardent spirit, distinguished from others by being impregnated with the essential oil of the juniper, by which it is rendered diuretic. In dropsical cases, when we think it prudent to allow a little spirits and water, gin is the spirit which we prefer, as giving a little assistance in increasing the urine. Gin is a favourite nursery remedy in the gripes of infants, accompanied with difficulty of making water; and the sensible practitioner will not quarrel very vehemently with the practice, provided the spirit be given only by a few drops at a time, and not too frequently repeated.

GINGER. The root of a plant which grows in the East and West Indies, the *Amomum Gingiber.* Its powder is a good carminative stimulant, and was at one time thought to be very serviceable in gout; it entered into the composition of the celebrated Portland powder. It prevents griping and flatulence, and therefore is a good addition to senna, or jalap, or rhubarb. When chewed, the root promotes the flow of saliva, and excites considerable heat in the mouth, by which the pain of toothach is sometimes alleviated.

GLANDS are organs destined for the alteration or secretion of some particular fluid. They are distinguished according to the fluid they secrete; and they vary in structure and in size, from the liver to the minutest points which secrete the fatty matter of the skin. Glands are believed to be peculiarly disposed to that sort of inflammation which ends in scirrhus and hardness, and is apt to end in cancer. The hard knots and swellings which we see in the necks and other parts near the surface, are glands; and they are, in scrofulous constitutions, apt to suppurate, to form unhealthy curdy-looking matter, and to turn to sores very difficult to heal. Swelled and hardened glands should be protected from the cold air by proper clothing.

GLAUBER'S SALT. Glauber was a chemist at Amsterdam, about the year 1660. There is much originality in his experiments, and he often reasons sensibly and acutely on their results. His inventions and discoveries are numerous and important; and among them are some sagacious anticipations of the improvements of modern chemistry. Having distilled common salt with sulphuric acid, he termed the residue *sal mirabile;* and to this day it retains the name of Glauber's salt. In the modern nomenclature, it is called sulphate of soda, and it is one of the most frequently used of the saline purgatives. Its crystals are six-sided prisms; their taste is strongly saline and bitter. The dose is from an ounce to an ounce and a half, dissolved in warm water, and taken in the morning. Of late years, its use in medicine has been much superseded by Epsom salts, or the sulphate of magnesia.

GLEET, *Gonorrhœa.* A continued running or discharge, after the inflammatory symptoms of a clap have ceased. The discharge is commonly thin and clear, and is not accompanied with pain or scalding in making water. It proceeds from relaxation or debility of the parts, and is best cured by some astringent or stimulant application to them; and at the same time, the general health is to be promoted by the use of bark, iron, and cold bathing. The best local applications are those made of the sulphate of zinc, in the proportion of two grains to the ounce, or one grain of corrosive sublimate to six ounces of water; and they require to be pretty frequently thrown up. They ought to excite a little pain on their first being used. If we do not succeed by astringent injections, we may be obliged to use bougies, either clean, or lightly touched with a little basilicon ointment. Balsam of Copaiba in the dose of a drachm three or four times a-day, or the tincture of cantharides, ten drops as often, may be given internally. If we find no benefit from the treatment above recommended, we judge that the

gleet does not arise from mere relaxation of the parts or from habit, but from unhealthy action of the glands in the urinary passage, and we attempt the cure of this by bougies, and by blisters to the perineum. If the constitution is scrofulous, the remedies for that disease must be conjoined with our local applications. Another cause of gleet is strictures in the urethra. In such cases our attention is to be directed to the cure of the strictures, for which we refer to that article.

GLOBUS HYSTERICUS. The sensation of a ball felt by hysterical women. It appears to roll about in the bowels, and to make its way to the stomach and throat, where it produces a feeling of choking. It is owing to wind, and is to be cured by medicines which strengthen the constitution and digestive system. It is strongly characteristic of the disease.

GLUTEN. When wheat flower or other farinaceous powders are put into a coarse bag, and kneaded with water, that fluid carries off their starch suspended in it, and a tough substance is left in the bag, which is called *vegetable gluten*. It is a soft viscid substance, tenacious, elastic, and very adhesive, having a fibrous texture, and a faint peculiar odour. When exposed to a dry air, it becomes hard and brittle, resembling a piece of glue. In a moist atmosphere, it swells, and undergoes putrefaction, emitting an offensive odour. Yeast or barm, which is employed to excite fermentation, particularly by bakers, is found to have many of the properties of gluten. Gluten is contained in greatest quantity in wheat; it is also found in other substances, though in small quantity, as in barley, rye, pease, beans, chesnuts, and many others. It does not, however exist in potatoes. Gluten, from its close resemblance to the principles of the animal kingdom, is supposed to be very nutritious. From the changes which it so easily excites in other bodies, it is employed largely in distilling, and also in the making of bread. (Fyfe's *Elements of Chemistry.*) *See* Bread.

GOITRE, or Swelled Neck, occurs frequently in the Alps and other mountainous districts. *See* Bronchocele.

GOOSE. A well-known domestic fowl. Its flesh is a favourite, though strong article of diet; and as it abounds in oily matter, some stomachs find it difficult of digestion.

GOOSEBERRY, *Ribes Grossularia*. A very wholesome fruit, either in its natural state or preserved. The only thing about gooseberries likely to offend the stomach is their being taken in too great quantity, or the husks being swallowed. They are to be avoided by those in whose stomach there is much tendency to acidity.

GOULARD'S EXTRACT of LEAD. A favourite preparation of lead, recommended by a French apothecary of that name. It is made by adding a gallon of vinegar to two pounds of semivitrified oxide of lead. These are to be mixed and boiled down to six pints, keeping constantly stirring. The impurities are allowed to subside, and the liquor is strained. It is employed chiefly as a dressing to repel local external inflammations; and is best applied by keeping cloths wet with it to the part affected.

GOUT. This long known and celebrated disease is one of the few maladies and infirmities of which men are disposed to be proud. As it is a disease chiefly brought on by rich and luxurious living, and as it rarely occurs among the poor and plebeian, to be afflicted with the gout is supposed to imply a degree of opulence and rank in the patient, which the vanity of man converts into a ground of consolation and pleasure. The paroxysms of gout, however, are sometimes so severe, that patients would be glad to have the reputation without the pain; and the sudden and fatal termination which it sometimes has, render its presence in the constitution by no means enviable. Gout is one of the diseases obviously transmitted by inheritance, and the facts observed on this subject are curious and important. A parent who, by high living, has made himself the subject of gout, transmits the

gouty tendency to his temperate son, who may suffer severely by it; or, by rigid abstinence and care continued through a long life, may escape its violence; and in his turn may transmit it to his descendants, of whom, not the immediate, but a subsequent race may become the innocent victims of the disease.

Symptoms. The symptoms considered as characterising gout are the following: The patient has a peculiar uneasiness about the stomach, there is a degree of fever; pain and inflammation attack the joints of the hands and feet, and principally the ball of the great toe; the feverish symptoms abate after some days, and at distant and uncertain intervals, the same series of symptoms again occurs. Such is the general outline of the gout, but it will be necessary to go a little more into detail. The paroxysms of gout generally come on in spring, when the vernal heat succeeds to the winter's cold; and according as this takes place sooner or later, and according as the patient is exposed to the changes of temperature, so the period of attack will vary. The patient is affected with a degree of languor or heaviness, the functions of the stomach are disturbed; there is loss of appetite, flatulence or indigestion, and those feelings continue for some days before the fit. There is an unusual coldness of the feet and legs, with a numbness or pricking sensation of the lower limbs, sometimes cramps of the legs or swelling of the veins. The attack is sometimes felt in the evening, but more commonly about two or three o'clock in the morning. The pain affects one foot, commonly in the ball or first joint of the great toe. When the pain comes on, there is more or less shivering, and this is followed by a degree of fever. The pain becomes more violent, and continues, with great restlessness, for four and twenty hours, when it considerably abates, a gentle perspiration breaks out, and the patient falls asleep. In the morning, the pained part is affected with redness and swelling, which in a few days gradually abate. During those days, the patient, though the pain be less, still has a good deal of it, with feverishness during the night; but at length the symptoms all go off, leaving the health of body and mind much improved; nor do they return till after a long interval. This interval may be three or four years, that is, when the disease is recent; but unless certain measures are taken, and a proper course of life is led, those intervals diminish, the patient may be attacked once in two years, or once every year, or may be brought to such a state as never to be entirely free from some gouty symptom or other. At first, one foot only is affected; afterwards, in each paroxysm, both feet are affected, the one after the other; and at length it not only affects both feet at once, but often, when it has abated in one, it suddenly darts into it again, and changes place not only from one foot to the other, but also from the feet to the other joints. When the disease has returned often, the pains are commonly less violent than at first, but the sickness and certain other symptoms hereafter to be described, are worse. After a paroxysm of gout, the joints recover their motion; but after repeated paroxysms, they become weak and stiff; and in violent and oft repeated attacks, they lose the power of motion altogether. In many persons, chalky concretions form on the outside of the joints, immediately under the skin. They are composed of uric acid and soda. The uric acid is the principal ingredient in various calculous concretions in the kidneys and bladder; and we find that gouty persons are subject to affections of the kidneys; and that in gouty families it is not unfrequent for the males to be affected with gout, and the females with diseases of the kidneys.

The symptoms above described may be regarded as a general view of the *Regular Gout;* but physicians have distinguished several other forms of the disease, which they term the *Irregular Gout.* It may happen to a gouty patient, that from some cause or other, he may not have the inflammatory affection of the joints, but va-

rious morbid actions of the stomach, as flatulency, loss of appetite, indigestion, and pain. These symptoms are accompanied by pains and cramps in different parts of the body, which are relieved by the discharge of wind from the stomach. Sometimes there is costiveness, sometimes the belly is loose. Such symptoms are attended with great depression of spirits, and with an anxious and fearful attention to the slightest feelings of pain. Sometimes the chest is affected, and palpitations of the heart, faintings, or asthma, occur; and the head is affected with giddiness, pain, and a tendency to apoplectic symptoms. These symptoms are to be considered as gouty, when they occur in a gouty constitution, and especially when there is mixed with them some inflammatory tendency to the parts usually affected, or when they are relieved by the inflammation coming on.

Another form of gout is, when there has been inflammation in the joints as usual, but when it has suddenly receded, and some internal part has become affected. This is most commonly the stomach; and this may be attacked with such violence as to occasion the most acute symptoms, vomiting, pain, or sudden death; and other internal parts may be affected, occasioning fainting, or asthma, or apoplexy. In some cases, instead of inflammatory affections of the joints, inflammation of some other parts may come on; and in such cases the inflammation must be treated as it would be when arising from any other cause.

Diagnosis. There are many symptoms of gout which bear a great resemblance to those of rheumatism; and it is not at all unusual for the two diseases to attack the same individual; but the habit of the patient, the season of the year, and the recurrence of the attack, will generally determine whether it is the gout or not.

Who are most subject to GOUT. The gout attacks chiefly men of large and robust bodies, of large heads, of corpulent habits, who lead an indolent life, and indulge in the pleasures of the table. It seldom attacks persons who live by bodily labour, or who are temperate in their diet, either from choice or necessity. It rarely makes its appearance before the age of thirty-five, except in those who have an exceedingly strong hereditary tendency to it. Females are more rarely subject to gout, and it is chiefly those whose constitutions resemble that of the other sex, or who are born of gouty parents, that are thus subject.

Causes of GOUT. In those who, by hereditary constitution or luxurious living, have a tendency to gout, it is brought on by various circumstances which induce debility, as excessive bodily indulgence, gluttony, or intoxication; much application to study or business, depressing passions, as grief or fear, great evacuations, as by bleeding or purging, too sudden an abridgement of the diet; a cessation from the labour or exercise to which a person has been accustomed; cold or damp applied to the feet. The proximate cause of gout, or what it is in the body that constitutes gout, has been the subject of much discussion among physicians. It would be unprofitable to detail their various opinions here, but we may remark, that it seems now to be generally agreed, that the gout is not owing to any acrid matter always existing in the system, and thrown out on particular parts by certain causes; but that it is a disease affecting the nervous system or moving powers; though the further explication of it may be difficult or impossible.

Cure of GOUT. As the gout depends on an original conformation; as it is generally the visitor or attendant of its victims during a long life; as one drug after another has enjoyed and lost the reputation of curing it, the opinion is very general that it is incurable, and notwithstanding all that has been done, and done for those classes of society who are best able to reward the restorers of their health, we must still say, that mere medicine can do but little for the gout. The sensible observations of Dr. Cullen, made fifty years ago, are applicable in all their

force to the present day. "It would perhaps have been happy for gouty persons, if the opinion of the impossibility of a cure had been implicitly received by them; as it would have prevented their being so often the dupes of self-interested pretenders, who have either amused them with inert medicines, or have rashly employed those of the most pernicious tendency. I am much disposed to believe the impossibility of a cure of the gout by medicines; and more certainly still, incline to think, that whatever may be the possible power of medicines, yet no medicine for curing the gout has hitherto been found. Although almost every age has presented a new remedy, yet all hitherto offered have very soon been either neglected as useless, or condemned as pernicious." The cure of gout, if it be curable at all, is to be effected solely by the early practice of activity and labour, joined with temperance and moderation both in eating and drinking. That even this will do, in the strongly predisposed, is by no means certain; but it is undoubtedly true, that free living will, in such, ensure the attacks of this painful disease. Could the occasional use of any drug, however nauseous, dispense with the necessity of abstinence and temperance, multitudes would willingly compound on these terms; but no such drug has yet been found, and for much of the treatment, the patient must minister to himself. But as paroxysms of the gout will occur in many individuals, and require whatever aid the medical art can afford them, we must not spend our pages in moralizing, but proceed to state what can be done for their relief. In the time of the paroxysm, all excitement must be avoided, and the antiphlogistic plan is to be put in practice; and though the application of cold is rather of a hazardous nature, some modern physicians have had the boldness to attempt it. It has not come into very general use; and when we consider how very fatal the gout commonly is, when it recedes spontaneously towards the internal parts, we shall certainly be very cautious how we repel it by cold in any form. All irritation should be kept from the patient, and the temper should be soothed as much as possible. He should remain in bed, and keep the pained parts moderately warm by the application of flannel or fleecy hosiery. Animal food should for the time be avoided, and the drink should be mild and diluent, as barley-water, gruel, or tea. In those who are weak, and who have been in the habit of using a generous diet, it might not be safe to retrench too much; and therefore they, even in the paroxysms, are to be allowed a diet, in some degree nourishing and stimulant. Madeira and sherry are the wines most proper to be used. To lessen the fever, blood-letting, rarely general, but sometimes topical, has been recommended. In this practice, regard must be had to the state of the patient's constitution, and the degree of inflammatory symptoms that may be present, and to the importance of the part so affected; and bleeding, general or local, is to be employed accordingly. Warm bathing and poultices to the part have been tried, but they are not always safe; and these, as well as some other external applications, have too often the effect of driving the gout to the internal parts. It appears, therefore, that upon the whole, our practice during the paroxysm consists chiefly in negatives; and that rest and patience, and gentle warmth, constitute the whole of the solace that art can furnish or prescribe. Opium, the ready reliever of pain, naturally suggests itself; but it is not safe till the first violence of the pain subsides; and then it may be given to allay the restlessness and irritation which prevent sleep. If the parts affected remain swelled and stiff, the flesh brush and moderate exercise are to be employed to discuss these swellings.

Such is the safest treatment during a regular fit of the gout; we must now mention what is to be done, when its attacks assume a different form. When the gout affects the stomach and intestines with cramp and griping, active stimulants must be imme-

diately used, as strong wine, taken warm or mulled; and if these are not powerful enough, brandy, or other ardent spirits, must be freely given. Opiates, joined with hartshorn or camphor, are useful; and musk also may be given. If vomiting comes on, it may be encouraged till the stomach is emptied; we are then to employ opiates and the other remedies mentioned above. If there be a looseness, it may be encouraged by drinking warm gruel or weak broth; and when the bowels are quite unloaded, opiates are to be given. Purging must be avoided at the end of a fit, as it often brings on a return. When there is asthma in gouty patients, a blister to the back or breast is to be put on. If the head be affected, the danger is great; but we are to try what can be done by blisters to the head, or bleeding, as we think the patient can bear it. When the gout makes its appearance as an inflammatory affection on some of the internal parts, we are to lay aside the consideration of its being gout, and to treat the inflammation as if it arose from any other cause; taking care not to weaken the patient too much by violent evacuations, especially by purging. When the gout, at its usual time, does not assume the regular form, but only some imperfect actions of the system mark the effort which is making to throw it out, care must be taken to avoid every thing of a weakening nature, and to strengthen the stomach and system in general by nourishing digestible diet, by a moderate allowance of wine, and by the use of chalybeates, the Peruvian bark, and bitters.

It would not be easy to enumerate all the drugs and compositions which have been fashionable for the cure of gout. One very famous article, some time ago, in England, was the Portland Powder, a compound of equal parts of the roots of round birthwort and gentian; of the leaves of germander and ground pine, and of the tops of the lesser centaury, all dried. Of this powder, composed of various bitters, Dr. Cullen has this very alarming notice. "In every instance which I have known of its exhibition for the length of time prescribed, the persons who had taken it were indeed afterwards free from any inflammatory affection of the joints, but they were affected with many symptoms of the atonic gout, (that is, of gout in which there did not appear to be strength enough to produce a regular fit, and in which, therefore, some of the internal parts were affected); and all, soon after their finishing their course of the medicines, have been attacked with apoplexy, asthma, or dropsy, which proved fatal." The remedy at present most in vogue is the Eau medicinale d'Husson; and this has the commendations of so high authority as Sir Everard Home. But the most judicious physicians seem to be convinced, that whatever may be the present apparent benefits derived from the use of those specifics in gout, they at last bring on the most pernicious effects.

There are many curious incidents recorded of the gout having been cured by strong mental emotions; as when a person in gout thinking himself unable to move, has been alarmed by his house taking fire; and having made successful exertions to escape, has continued free from gout ever after; or when there has been a call for activity and usefulness in repelling the attacks of an enemy, the pain of gout has been overpowered by a more animating and generous feeling.

Management of Gouty Persons *during the interval of the paroxysms.* Our great object should be to prevent their return, or to render them less severe and less frequent; and for this purpose, various observances are to be attended to. As already often inculcated, abstinence and temperance are the great preventives of gout; and in those who know themselves to have a hereditary tendency to it, or who have already had one or more attacks, such abstinence must be steadily persevered in. Labour or exercise is also of essential importance; but care must be taken that it is not too violent, as the

consequent fatigue is likely to bring on the gout. The diet should consist of such articles as convey sufficient nourishment, without giving a tendency to the plethoric or inflammatory state. For this purpose, if an abstemious course be early begun, the proportion of animal food should be very small; but in those who have accustomed themselves to pretty full living, too great a diminution of animal food may induce a debility that will make the gout worse. Fermented and spirituous liquors are unnecessary, unless where the patient has been long in the habit of taking them; and where the constitution and digestion are good, water is the most proper drink. It is found that it will not promote the desired object, if a person only for a short time practises the labour and abstemiousness enjoined; but that it must be begun early, and persevered in through life.

GRAVEL. *See* STONE AND GRAVEL.

GREEN SICKNESS. *See* CHLOROSIS.

GREGORY'S MIXTURE. A useful laxative powder, composed of eight parts of calcined magnesia, two of powdered rhubarb, and one of ginger; a favourite prescription of the late Dr. Gregory of Edinburgh. He considered it as possessing various good properties, the magnesia correcting acidity, the rhubarb acting as a tonic and laxative, and the ginger being a good aromatic for the stomach, and preventing griping of the bowels. The dose of this compound powder is one or two drachms, or a heaped tea-spoonful; and it may be taken in water, in gruel, milk, or any vehicle that may be most convenient. It generally operates easily and effectually, and may be taken at any time of the day. The dose may be repeated after an interval of four or six hours, if the first does not produce its proper effect. Sometimes it may be advisable, especially for children, to omit the ginger, and to give simply a mixture of rhubarb and magnesia, in the dose of a small tea-spoonful.

GRIPES. Painful spasmodic twitches of the bowels, which accompany various disorders, and also the operation of some purgative medicines. They are attendants on colic, of which, indeed, they are the principal symptom; in looseness of the bowels, the frequent stools are commonly preceded by severe gripes; and a great part of the sufferings of children proceed from griping in the bowels. As gripes are to be regarded rather as a symptom of disease, than a disease itself, our attention is to be directed to the cure of the primary affection; but sometimes the severity of the pain is so great, that we are compelled to do something for its relief, even at the risk of aggravating for a time the original complaint. For this purpose, we may cautiously give an opiate, or some carminative medicine, apply fomentations to the belly, or give anodyne injections. To children, when screaming from the pain of gripes, which we judge to be the case when they twist about the body and draw up the feet, at the same time crying much, we may give a few drops of laudanum, or a little weak gin and water, or a little sugar of anise. To prevent the griping which accompanies the operation of senna and some other medicines, we may combine with them some aromatic powder, as ginger or cinnamon.

GRUEL. A decoction of some of the farinaceous vegetables in water, much used as a mild and diluent drink in a great variety of diseases. Though insipid to those who are in robust health, it is a very pleasant beverage to those who are sick, and it is a pity that many of them tire of it so soon. It is very useful in all feverish disorders, in catarrh or common cold, and in diseases of the bowels. To secure the excellence of this valuable article, we give from Dr. Kitchener the best recipe for preparing it. "Ask those who are to eat it, if they like it thick or thin; if the latter, mix well together by degrees, in a pint *one* table-spoonful of oatmeal, with three of cold water; if the former, use *two* spoonsful. Have ready in a stewpan a pint of boiling water or milk, pour this by degrees to the oatmeal you have mixed, return it into the stewpan, set it on

the fire, and let it boil for five minutes, stirring it all the time to prevent the oatmeal from burning at the bottom of the stewpan. Skim and strain it through a hair sieve." (*Cook's Oracle.*) Water-gruel, as the Doctor quotes from an old book, is the king of spoon-meats, and the queen of soups, and gratifies nature beyond all others.

GUAIAC, *Guaiacum officinale.* The name of a plant, from which there exudes in the form of tears, a resin which has been long esteemed a good remedy in chronic rheumatism, in certain syphilitic symptoms, as foul indolent ulcers, in some diseases of the skin, and scrofulous affections of the membranes and ligaments. The resin excites a sense of warmth in the stomach, and a thirst and dryness of the mouth; and produces perspiration if the patient be kept warm. It may be given in the form of pills, in the dose of ten to twenty grains in the day: Or one or two drachms of the tincture may be given, but not in water, as from its resinous quality it immediately becomes white and thick when it reaches the water, to the great surprise and disgust of the patient; for this reason, it had better be given in a little milk. The decoction of the wood of guaiac is a form of giving it, much used in foul ulcers. The dose of the decoction is from two to four ounces. There is also a tincture of guaiac combined with hartshorn, which possesses more of the stimulant and sudorific properties, and may be taken to the extent of a drachm or two; when the dose of guaiac is larger than those above mentioned, it proves purgative. Mr. Brande says that combinations of guaiac are at all times liable to change their colour, especially when combined with sweet spirits of nitre; and they are often prescribed together, forming a perfect vegetable cameleon, a circumstance which should be explained to the patient, who may otherwise be alarmed at the non-identity of his medicine. Mr. Brande thinks but lightly of the power of the decoction in ulcers or cutaneous cases.

GUINEA WORM, *Gordius medinensis.* A small white worm, with a black head, which is found in different parts of the body, between the muscles and cellular membrane. The disease chiefly occurs in negroes who are brought from the coast of Africa, or Europeans who have lately returned from that place, and is supposed to arise from bathing in the ponds or wells, or drinking of the water in which the small worms are deposited. They are probably caused by the embryo worms getting into different parts of the body, and forming a nest for themselves till they acquire a considerable size. The Guinea worm does not at first occasion any acute pain, but rather an itching, and on inspection a small blister is perceived. At length, as it advances, the part becomes swelled, inflamed, and painful to the touch, and breaks at last, when the head of the worm protrudes, and in a little time it may be laid hold of. By breaking the worm, from being in too great a hurry to extract it, ulcers are sometimes formed. When the swelling is hard, a poultice should be applied. When it breaks, and the head of the worm can be taken up, it is proper to make a small roll of cotton, to which the worm is to be tied, and this twisted round a little every day, till the whole is brought out. The sore is then to be dressed in the usual way, as from any other cause.

GULLET, called in anatomy *Œsophagus.* At the back part of the mouth there are two passages downwards; the anterior is that which leads into the wind-pipe; and the posterior is the pharynx or commencement of the *gullet*, by which the food and other substances pass into the stomach. The gullet consists of several coats, one of which is muscular, being furnished with orbicular fibres, and above those, with longitudinal ones; in consequence of whose action, the different portions of the gullet contract successively, and the passage is for the time closed above the descending morsel. The innermost coat is covered with mucus, secreted by numerous glands whose orifices open on its surface. This

mucus frequently concretes during the night, and is with difficulty brought up. It may proceed from improper diet or heavy suppers; and diluent drinks, alteration of the offending diet, with abstinence from supper, or taking a very light one, will probably correct this troublesome occurrence.

Of Swallowing. The morsel is collected on the upper surface of the tongue, is squeezed against the bony palate, and then carries the soft palate backward and upward; the pharynx meets it, the tongue keeps close to the soft palate, and by this action, the epiglottis shuts the chink of the larynx. May we here be indulged in the following quotation from Dr. Paley? "Both the weight of the food, and the action of the muscles concerned in swallowing, contribute to keep the lid close down upon the aperture, whilst any thing is passing; whereas, by means of its natural cartilaginous spring, it raises itself a little, as soon as the food is passed, thereby allowing a free inlet and outlet for the respiration of air by the lungs. Such is its structure: And we may here remark the almost complete success of the expedient, viz. how seldom it fails of its purpose, compared with the number of instances in which it fulfils it. Reflect how frequently we swallow, how constantly we breathe. In a city-feast, for example, what deglutition, what anhelation! Yet does this little cartilage, the epiglottis, so effectually interpose its office, so securely guard the entrance of the wind-pipe, that whilst morsel after morsel, draught after draught, are coursing one another over it, an accident of a crumb or a drop slipping into this passage (which nevertheless must be opened for the breath every second of time), excites in the whole company, not only alarm by its danger, but surprise by its novelty. Not two guests are choked in a century."

The power of swallowing is impeded or lost, from various causes, as from an ulceration of the gullet destroying the continuity of the circular fibres; thickening of the mucus, strictures of the passage from spasms or from growths in it, or from bronchocele or other tumours pressing against its sides.

GULLET, *Strictures of.* Stricture is a contraction of part of a tube or canal. The most remarkable symptom of such contraction in the gullet is the difficulty of swallowing, which is greater or less in proportion to the obstruction. Sometimes no solid food can pass down, and fluids only with great difficulty, and in very small quantities. Sometimes there is pain extending to the ear, returning at intervals, and continuing for a considerable time, even where there is no effort made to swallow. If the stricture be from a permanent cause, a bougie passed downwards is stopped; and such strictures sometimes occasion ulceration at a distance from themselves and nearer the orifice of the stomach. Sometimes strictures are so complete, that it is impossible for the patient to swallow any thing whatever; nourishment can be conveyed only by clyster; and in general he soon dies emaciated for want of food. The only treatment possible is the passing of a bougie through the stricture, if it will admit of this, and employing one of larger size in proportion as the dilatation of the stricture will allow. Some surgeons venture on the introduction of a bougie armed with some caustic substance. Liquid nourishment may be conveyed by a hollow bougie.

GULLET, *Strictures of, from Spasm.* This is a very common symptom of hysterics; and when violent, must be relieved by antispasmodics and anodynes, applied both internally and externally. Mustard poultices, ammonia, or other rubefacients are to be employed, and a blister may be required; but if the threatening symptoms of apoplexy or of violent pain be present, it may not be prudent to wait for its operation, and we must open the jugular vein or temporal artery. If the spasm be occasioned by acrid or poisonous substances having been swallowed, the parts must be sheathed by mucilages, oil, or milk; and we must guard against inflammation. The bowels must be kept very open.

GULLET, *Foreign bodies in.* It is not at all an uncommon occurrence for foreign bodies to stick in the gullet, as pieces of crust or meat not completely chewed, or small bones, beans, stones, pins, or pieces of money. Some of these would produce a very bad effect if not quickly removed from the gullet; and perhaps still worse, if pushed down into the stomach; but sometimes pretty large bodies have passed downwards into the stomach, and have been discharged by stool in a few days, without any inconvenience. The contrivances for removing bodies which have stuck in the gullet, must be left to the ingenuity of the medical man who sees the case. "Pins and other sharp bodies, when they have stuck in the throat, have been returned by swallowing a piece of tough meat tied to a strong thread, and then pulled up again. If the detained body may be more safely pushed down, the probang, a flexible piece of whalebone, with a piece of sponge secured to its end, is a safe instrument. If the bodies cannot be easily moved up or down, endeavours should not be continued long, lest inflammation come on. When endeavours fail, the patient must be treated as if labouring under an inflammatory disease, and the same treatment will be required if an inflammation take place in the part, after the obstructing body is removed. A proper degree of agitation has sometimes succeeded in removing the obstructing body, better than instruments. Thus, a blow on the back has often forced up a substance that stuck in the gullet or wind-pipe. Pins which have stuck in the gullet have been discharged by riding on a horse or in a carriage. In the London Medical Transactions, is an account of a crown-piece which a man swallowed. An emetic was given, but without discharging the piece, which, after twenty months, was brought up by spontaneous vomiting." (DR. PARR.) If the respiration is dangerously impeded, it will be necessary to make an opening into the windpipe; the method of doing which is stated under the article BRONCHOTOMY.

GUM. A thick, transparent, tasteless fluid, which exudes from certain species of trees. It is adhesive, and hardens without losing its transparency, and is again easily softened by the application of water. The cherry-tree of this country exudes a good deal of gum; but what is known by the name of gum arabic is furnished by various trees of the species called *Mimosa* by Linnæus, and *Acacia* by Willdenow and later botanists. Gum dissolved in water is an excellent mucilaginous demulcent, and is useful when we wish to supply a deficiency of mucus in the intestines, or to lessen any acrimony in the wind-pipe during a cold, accompanied with hoarseness and cough. For these purposes, it may be given with a little sugar to take away its insipidity, or added to diluent drinks or cough mixtures Gum may be allowed to dissolve gradually in the mouth, by being taken in the form of troches or lozenges, with a little sugar and starch.

GUM. The name given to various affections of the skin of infants. These most commonly noticed are the red gum and the yellow gum.

The *Yellow Gum* appears on a great many children about the second day after birth, and is in reality a species of jaundice, from the absorption of bilious matter. It generally goes off in a few days by the assistance of a mild purgative, as a little castor oil or manna. Sometimes the yellow gum is a more severe and dangerous ailment. The skin is of a deep yellow colour, there is great drowsiness and insensibility, and the child is unable to suck. Very active treatment is necessary. An emetic of ipecacuan is to be given, and laxatives of castor oil, or jalap, with frequent doses of manna. The child may be put into the warm bath, and the spine and abdomen rubbed with a stimulating embrocation.

Red Gum. This name is applied to an eruption of numerous little pimples, intermixed with red dots, and sometimes with large red patches. There are several varieties of the gum which require

nearly the same general treatment. Sometimes it is very general over the whole body like the measles; in other cases, it appears only on the face or extremities. The infant does not seem to suffer a great deal of uneasiness from this eruption, which distinguishes it from measles, in which there is much fever and general disorder of the system. There is one variety of the gum where the spots are of a yellowish or pearly colour, much resembling the itch, but certainly distinguished from it by the disease not being communicated to those who are about the child. The gum proceeds from an irritable state of the bowels, and little medical treatment is required, except to regulate the evacuations. Tepid bathing may be employed, and cold air and the cold bath are to be avoided. The great danger to be dreaded from the gum, is its being suddenly repelled. This is followed by violent disorders of the bowels, screamings, and in some cases with fits. It is to be brought back by warm bathing, and the bowels are to be kept open by castor oil or other mild purgatives.

There is a severe and dangerous inflammation of the eyes, which the vulgar account for by saying the *gum* has fallen into them. This explanation is altogether absurd. The nature and treatment of the disease will be found under *Purulent Ophthalmia*, *Art.* EYE, *Diseases of.*

GUMS. The red compact substance which covers both sides of that part of the upper and lower jaw, in which the teeth are fixed. This fleshy-like substance insinuates itself between the teeth, and adheres to them. The gums are well supplied with nerves and blood-vessels. Hence their sensibility and bright red appearance.

GUMS, *Diseases of.* The gums are apt to become soft and spungy, and to separate from the teeth. This is particularly the case, when the tartar which is deposited from the saliva is in great quantity, and incrusts the teeth. When this is removed, the gums soon get well; and their firmness is promoted by proper washes, as of the tincture of myrrh, or infusion of roses. A good wash for the gums may be made by dissolving a drachm of alum in a pint of water, and adding two or three ounces of the infusion of roses. Sea-scurvy, or that disease which is brought on by the long continued use of salt provisions without a due admixture of vegetables, exerts its influence very conspicuously on the gums; and frequently when no other symptom of the disease is manifest, it is to be detected by its appearance there. They become soft and spungy, and bleed on the slightest touch. Applications to the gums are of no avail, unless vegetables, lime-juice, or other antiscorbutics, are used for the cure of the constitutional disease. As assistants to them, tincture of myrrh, or diluted muriatic acid, may be employed as a wash for the gums.

Of scarifying the GUMS *of* INFANTS. As the gums are firm and compact, and completely cover the teeth in early infancy, the stretching of the gums, as dentition advances and the teeth are near cutting, is productive of much irritation to the tender constitution of the young subject. To be convinced of this, we have only to think of the distress occasioned by a thorn in the cellular substance of grown-up people, when it occasions inflammation and suppuration to throw itself off, and imagine how painful ten or a dozen such irritating bodies must be in the mouth of a delicate infant. Many ailments are the consequence of this state of the gums, fever, convulsions, looseness, swellings of the neighbouring parts; and many other troublesome and dangerous symptoms are often seen to attend it. Great relief is obtained by cutting thoroughly down upon the gum, till the teeth are touched by the instrument; and this must be completely done by incisions crossing each other. Generally the most urgent symptoms quickly disappear; and there is no occasion to be afraid, that if the gum should again grow over the teeth, the scar will be peculiarly hard and firm, or that it will be at all difficult to repeat the operation if necessary. *See* TEETHING.

GUM-BOILS very generally arise from toothach, occasioned by cold producing inflammation in the hollow of a spoiled tooth. Gum-boils are very painful, and their inflammation extends a considerable way, and produces much swelling of the cheek or of the whole face. Sometimes this complaint originates in the socket of the tooth, or in the jaw, without any connexion with the tooth. The pain is somewhat relieved by keeping warm fluids in the mouth, as boiled milk or barley-water; and if suppuration cannot be prevented, we are to hasten it by the application of a roasted fig or onion to the gum, and bread and milk in a bag, by way of poultice to the outside of the cheek. When the abscess is formed, it should be opened as soon as convenient; and the poultice should be applied a day or two longer; and the mouth is to be washed three or four times a-day with warm infusion of roses. If a decayed tooth be the cause, the complaint will be apt to return on any exposure to cold; the tooth should therefore be stopped by the dentist, or extracted if it is not likely to be serviceable.

GUNSHOT WOUNDS. *See* WOUNDS.

GUTTA SERENA, *Suffusio nigra*, are names for that species of blindness described under the diseases of the EYE, termed *Amaurosis* or *Black Cataract;* which is owing not to any apparent defect of the eye as an optical instrument, but to insensibility of the retina or optic nerves. *See* page 253.

The above definitions will enable the readers of poetry to understand what Milton means, when, in the celebrated complaint on his Blindness, he says,

> So thick a *drop serene* hath quenched their orbs,
> Or *dim suffusion* veiled.
>
> *Paradise Lost*, III. 25.

H

HABIT. This term, when applied to corporeal subjects, signifies the effect of frequent repetition in facilitating the performance of certain motions or trains of actions. A conspicuous illustration of the power of habit, is seen in the practice of musicians on various instruments. To play on any of these, required at first the closest attention to exert the power of volition in directing the various muscular motions required; but by habit, those motions return in their proper order, without the slightest apparent effort; and even while the performer can think and talk on other subjects. When a child begins to learn the art of reading, the form of every letter, and the power of every syllable demands his attention; but in maturer years, the eye glances over the page with the rapidity and certainty of instinct, and seizes the words before it, without the consciousness of an effort. The effects of custom or habit on the mind and body are interesting in a metaphysical, ethical, and physiological point of view. We are all the creatures of habit, and our circles of actions, as Dr. Darwin calls them, return with astonishing and noiseless regularity. When the time of meals or of sleep arrives, though the stomach be not empty, nor the limbs fatigued, though the mind be occupied with other things, the usual sensation of hunger or oscitancy comes, and we feel the want of something to which we have been accustomed. The repetition of certain motions renders the muscles that perform them quick and strong, or delicate and steady in their action; hence the strength of the arm of the blacksmith and back of the porter, the dexterity and skill of the watchmaker or philosophical instrument maker; hence the ease of the mechanical part of their art to

the painter or sculptor; and the steadiness of the limbs and acuteness of vision of the mason and sailor, in the execution of their perilous occupations.

Good habits, early begun, contribute much to the preservation of the health. Early rising, temperate meals, and regularity in the alvine discharge, when early practised, and diligently persevered in, will give a degree of comfort and vigour, unknown to the irregular and careless liver. Infants can very soon be taught the habit of feeding at regular times, and of performing the usual evacuations. The action of medicines on the living body is much influenced by habit. A person who is accustomed to take emetics or purgatives, requires after a time to have their quantity increased; and the opium-taker and dram-drinker require their poison to be increased either in quantity or activity, to produce the usual effects. By habit, the most nauseous substances lose their disagreeable effects, and contagions lose their power; thus, the use of tobacco is a luxury; and the culprit has been known to occasion fever in others, by bringing contagion from his cell, where he himself had been in the habit of inhaling it with impunity.

The power of habit in prolonging diseases, is remarkably seen in the case of intermittent fevers, epilepsy, hysteria, and hooping-cough; and great part of the cure consists in breaking the morbid habits, and inducing healthy ones. This is to be done in various ways, according to the disease; in hooping-cough, by change of air, by opiates, and emetics; in hysterics, by furnishing interesting employment for the mind and body by conversation, reading, exercise, and going on a journey; in epilepsy, by a total change of diet, and a course of laxatives, or other alterative medicines; and in intermittent fever, by postponing the fits, and breaking the regular returns, by bark, or other medicines; and by removing entirely from the neighbourhood of places where marsh effluvia are known to be prevalent.

HÆMATEMESIS. *See* VOMITING *of Blood.*

HÆMATURIA. *See* URINE, *Bloody.*

HÆMOPTOE, *or* HÆMOPTYSIS. *See* SPITTING *of Blood.*

HÆMORRHAGE, *or* HÆMORRHAGY. A discharge of blood, either from the rupture of blood-vessels, or the consequence of accidental injuries, or of surgical operations. Though the word, strictly speaking, signifies bleeding of any kind, or by any means, it is more commonly used to denote such discharges as are attended with danger, and which we would always stop if it were in our power.

Of Spontaneous HÆMORRHAGIES. There are many diseases of which the discharge of blood is the most prominent and alarming symptom; and immediately before and after this article will be found the medical names of several of them, with reference to the places where their symptoms and treatment are detailed.

Physicians distinguish two kinds of Hæmorrhagies, the active and the passive; the first being chiefly from arteries, and accompanied with feverish symptoms; the latter being generally from veins, and attended with general or partial debility. The active hæmorrhagies are those which are known in popular language by the bursting of a blood-vessel; and they occur at particular periods of life. Thus a bleeding of the nose, or a spitting of blood from the lungs, is very common between fourteen and twenty; while hæmorrhoids, or bleeding piles, and the rupture of a vessel within the skull occasioning fatal apoplexy, are the affections of a later period, as from thirty-five to sixty. These discharges, taking place from particular organs at certain periods of life, are believed to be connected with the circumstances attending the growth and development of the different parts of the body. "This growth consists, in a great measure, in the increase of the quantity of fluids, and a proportional enlargement of the containing vessels. But, at the same time, the quantity of solid matter is also gradually increased; and it is probable

that the progress depends upon the extension of the arterial system; and the motion of the blood in the arteries has a constant tendency to extend them in every dimension. As the state of the animal solid is, at the first formation of the body, very lax and yielding, so the extension of the system proceeds at first very fast; but as the extension gives occasion to the apposition of more matter to the solid parts, these are, in proportion to their extension, constantly acquiring a greater density, and therefore giving more resistance to their farther extension and growth. Accordingly, we observe, that as the growth of the body advances, its increase, in any given time, becomes proportionably less and less, till at length it ceases altogether. This growth does not proceed equally in every part of the body, it being requisite for the economy of the system, that certain parts should be first evolved, and should also acquire their full bulk sooner than others. This appears particularly with respect to the head, the parts of which appear to be first evolved, and soonest to acquire their full size. As the vessels of the head grow fastest, and soonest acquire their full size, so they will soonest also acquire that density which will prevent their further extension." (Dr. CULLEN.) The force of the heart and the quantity of the fluids with respect to the whole system remaining the same, the distending powers continue to operate till they are brought nearly to a balance with the resistance of the solids; and after this, any increase of the distending powers will readily produce a rupture of vessels which do not easily yield to extension. If there be a plethoric state or excitement, while the head is yet growing, the increased quantity of blood will be especially determined to the head; and as the balance between the distending and resisting powers is there most nicely adjusted, the determination of blood will most readily produce a rupture of the vessels. Hence a bleeding from the nose so frequently happens in young persons; and in these more readily, as they approach nearer to their full growth. The reason why the hæmorrhagy takes place from the nose rather than from any other part of the head, is, that a considerable net-work of vessels is expanded on the internal surface of the nostrils, and covered only with a thin and weak membrane. In other persons at the time of their body approaching its acmé, a spitting of blood or hæmorrhagy from the lungs, takes place, when the system of the aorta, or great vessel which sends the blood through the body, has reached its utmost extension and resistance, and when the plethoric state of the body especially affects the lungs; although these important organs are also in numberless instances affected from a faulty proportion between their capacity and that of the rest of the body, though there be no general fulness of the system.

Symptoms of ACTIVE HÆMORRHAGY Perhaps these physiological remarks are already too tedious and minute for the general reader. We shall therefore proceed to describe the phenomena of hæmorrhagies in general, from Dr. Cullen, to whom we are indebted for much of the preceding observations: "Hæmorrhagies happen especially in plethoric habits, and to persons of a sanguine temperament. They appear most commonly in the spring, or in the beginning of summer. For some time, longer or shorter in different cases, before the blood flows, there are some symptoms of fulness and tension about the parts from whence the blood is to issue. In such parts as fall under our view, there are some redness, swelling, and sense of heat or of itching; and in the internal parts, from which blood is to flow, there is a sense of weight and heat; and in both cases, various pains are often felt in the neighbouring parts. When these symptoms have subsisted for some time, some degree of a cold stage of fever comes on, and a hot stage is formed, during which the blood flows of a florid colour, in a greater or lesser quantity, and continues to flow for a longer or shorter time; but commonly, after some

time, the effusion spontaneously ceases, and together with it, the feverishness also. During the hot stage which precedes an hæmorrhagy, the pulse is frequent, quick, full, and often hard; but, as the blood flows, the pulse becomes softer and less frequent. In hæmorrhagies, blood drawn from a vein, does, upon its concreting, commonly show the gluten separated, or a crust formed, as in the case of inflammations. Hæmorrhagies, from internal causes, having once happened, are apt, after a certain interval, to return; in some cases very often, and frequently at stated periods."

Occasional Causes. In those who are predisposed to hæmorrhagy, it is brought on by external heat, violent exercise, especially that which requires much exertion of the function of respiration; anger, and other exciting passions; by postures increasing the determination of the blood to any weakened blood-vessels, or ligatures which cause its accumulation there. Cold, by determining the blood to the internal parts, may be the cause of hæmorrhagy.

Prevention and cure of Active Hæmorrhagy. We are to prevent it by preventing a plethoric state of the body, which is to be done by abridging the diet as to its quantity and stimulating properties; the bowels are to be kept open; and when disease seems impending, a bleeding may be taken from the arm, but not repeated. When hæmorrhagy has actually come on, we are to deal with each particular kind of it, by its appropriate remedies. In some hæmorrhagies, the feverish symptoms are relieved by the bleeding that occurs; but we cannot always be sure that this will happen, and the bleeding may take place from a part so dangerous, that it is better to take blood copiously from the arm. This is particularly the case in hæmorrhage from the lungs. In this, astringents also are useful, as the diluted sulphuric acid in cold water or in the infusion of roses; ten drops to four ounces of the liquid, a small wine-glassful to be taken three times a-day. Solutions of sugar of lead or alum may sometimes be applied externally, as in bleeding at the nose. Cold applied by means of cloths soaked with some cooling lotion, is a powerful means of repressing hæmorrhage. The bleeding stops when a person faints; and this occurrence, therefore, in profuse hæmorrhagies, is not to be prevented from taking place.

Of Passive Hæmorrhagy. The monthly discharge of blood from the female uterus is not to be considered as a disease; but when it is much too copious, and returns irregularly, or becomes constant, it is the mark of a debility either of the constitution or of the uterine system; and is to be treated as a passive hæmorrhagy. Habitual bleeding from piles, discharges of blood by stool from vessels bursting into the upper parts of the intestinal canal, and the profuse bleedings which sometimes take place in scurvy, are examples of passive hæmorrhagy. They are to be cured by strengthening the system, and relieving the original disease.

Of Hæmorrhage *from Wounds and Surgical Operations.* As profuse bleeding is a conspicuous and dangerous occurrence, whether induced by accident or by the instruments of the surgeon, it has in all ages attracted much attention. "An instinctive terror," says a French author, "is associated with the idea of the loss of blood; a terror of which the infant just beginning to speak, and the most determined man, are alike susceptible. One cannot say that this fear is chimerical. Of those who perish on the field of battle, three-fourths die in consequence of hæmorrhage; and in all the great operations of surgery, this accident is the most formidable that occurs." The fear of hæmorrhage was the great obstacle to the improvement of surgery among the ancients. As they were unacquainted with the method of stopping the flow of blood from arteries of any considerable size, they used caustic and ligatures for the performance of operations, which are

now easily and safely executed with the knife. Blood may flow profusely either from a wounded artery or a wounded vein; but the danger of arterial hæmorrhage is far greater than that of venous, on account of the rapidity and force with which the blood is propelled through the arteries; a wounded artery, not larger than a crow-quill, is sufficient to evacuate all the blood of the body in a few minutes. When the artery is wounded, blood of a bright scarlet colour issues from it by jerks, with great rapidity. The blood flows from a vein in an even and unbroken stream, and of a dark purple colour.

Process of Nature in suppressing HÆMORRHAGE. When an artery of no very great size is cut across, after the blood has flowed some time, it ceases, in consequence of the diminished force of the circulation allowing a clot to be formed, which shuts up the mouth of the vessel. The cut end of the artery next inflames, and a lymph is poured out which fills up its extremity, and is firmly united all round to the internal coat of the vessel. The impervious extremity of the artery gradually contracts till its cavity is completely obliterated, and its coats assume the appearance of a ligament. When an artery is merely punctured or partially divided, the bleeding is less likely to stop spontaneously than when cut fairly across.

Surgical Methods of suppressing HÆMORRHAGE. 1. Applying the *actual cautery* to the cut vessel, and part of the surrounding flesh. An eschar was formed, which blocked up the opening of the vessel. If this eschar separated too soon, there was great danger of a renewal of the hæmorrhage, in a degree more dangerous and difficult to suppress than before the cautery was applied. This method of stopping bleeding was a good deal employed by the ancients; but is now scarcely used, except in bleedings from the mouth and neighbouring parts, which cannot be checked by any other means. 2. *Styptics and astringents*, as blue vitriol, alum, solutions of the salts of iron, diluted acids, turpentine, have all been employed with the view of checking hæmorrhage. They are quite inefficient when any considerable artery is wounded; but they may be useful when there is merely an oozing of blood from the minute vessels of a large surface. The same remark applies to cold, which is a powerful astringent. Agaric, a spongy substance which grows on old oaks, and sponge itself, have also been employed; they probably do not act as astringents, but by forming a plug to the vessel when they swell from the imbibing of moisture. 3. *Compression* of the sides of the bleeding vessel, of course stops the bleeding for the time; and could it be continued long enough, would frequently accomplish a permanent closure of the vessel. It is tried sometimes, when we can press the artery against a bone; as at the hand or the arm, when an artery has been wounded in phlebotomy; but the instances of success have not been so numerous as to warrant much confidence in the practice. 4. A *ligature*, or thread of silk of various thickness tied round an artery, effects a permanent closure of it in the following manner. The arteries are composed of three coats; of which the internal and middle are cut through by the ligature as if it had been done with a knife. The wounded surfaces are brought together, a clot of blood commonly forms just within the artery, inflammation is excited on the internal and middle coats, lymph is poured out, by which the wounded surfaces are united, and the canal rendered impervious; in short, the same process takes place as already described, the only difference being, that the ligature originates the process with more certainty than the spontaneous efforts of nature. Ligatures are made of silk or strong threads, joined together with white wax. They should not be too broad, otherwise they will not cut the internal coats of the artery as they ought to do. Ligatures drop off from the largest arteries within a fortnight or three weeks after they are applied; and the artery continues shut

for ever after. The force of the heart impels the blood into the neighbouring vessels, and enlarges them sufficiently for all the purposes of growth and nourishment, and the limb or stump suffers no permanent inconvenience from the obliteration of the original artery.

Without inquiring into the guesses and approximations of the ancients on this subject, we may claim for Ambrose Paré (1572) and the surgeons who have succeeded him, the entire merit of all that is now known and practised for the suppression of hæmorrhagy, especially the ligature. It is the admirable effects of that contrivance, and the complete command which it gives us over hæmorrhage, that has emboldened the modern surgeons to perform the most hazardous operations, and to apply their ligature to the largest artery, with as much confidence as the ancients applied their styptics to the most insignificant bleeding surface. Amputations are successfully performed even at the hip and shoulder joints; and aneurisms are now cured in a few days with very little pain and no danger, which, forty years ago, would have occasioned the loss of a limb or of life.

Of Venous Hæmorrhagy. This is far less dangerous than the arterial. Hæmorrhage is known to be from a vein by its dark colour, and by its not issuing by jerks. It is in general easily stopped by compression, which must be applied farther from the heart than the wound in the vein.

HÆMORRHOIDS. *See* Piles.

HAIR. "The hair is hollow, and grows from a bulbous root, resembling in many respects a vegetable substance. The root itself seems to be composed of very fine filaments, and a glutinous substance, probably secreted from its vessels. These filaments unite to form the stem, which usually passes between the little eminences in the skin. When the cuticle is porous, as in the scalp, the hair seems to pass out in a cylindrical form; but where it is less so, and particularly where the bulb is buried in fat, it passes in a serpentine direction, with great difficulty, as in the armpit, &c., and it is then tortuous and irregular. The hair is nourished by the gluten of the root; and as this is more copious or more fluid, it is more succulent. When in a smaller quantity, or more dense, the hair is dry, crisp, and soon falls off. When not carried to the extremities, these split and become brittle. The roots or bulbs of hair are found over the whole body; nor is it easy to say why they continue to vegetate on some particular parts only. The hair evidently partakes of the nature of the simple solid, corresponding with it in firmness or softness. The bulb is nourished by arteries, and supplied with nerves; and the hair chiefly grows by gradual addition at its extremity. The circulation through it is probably carried on by capillary attraction, or in the manner in which the sap of vegetables is propelled. By combing, we free the fluid from those obstructions which must arise in consequence of its being bent in all directions. We promote also the circulation through the bulb, and relieve the head from accumulations. A fluid seems to exude through the hair, at its basis, and is probably the black matter which unites with the perspiration, producing the scales that soon form on the scalp, if combing is neglected. Chemists have discovered that hair contains an oil, a mucous substance, iron, oxide of manganese, phosphate and carbonate of lime, flint, and a large proportion of sulphur. White hair contains also phosphate of magnesia, and its oil is nearly colourless. When hair becomes suddenly white from terror, it is probably owing to the sulphur absorbing the oil, as in the operation of whitening woollen cloths. Long hair has always been esteemed an ornament, but it has been doubted whether it was not injurious, by the quantity of blood which it exhausted in its nutriment, and the consequent debility which it would produce. When very thick, it is uncomfortable from its warmth; but we have never known it to be a cause of weakness, except from the perspiration which a large mass of hair

must occasion. Cutting off the hair has, within our own knowledge, been often injurious, and attended with every appearance of local plethora. As usual, moderation is the best; and if it hang over the shoulders, it is long enough, unless it grows at the same time thinner, and in that case it must be cut shorter. To increase the growth of hair, various preparations have been employed, and each perfumer has his secret; though we know not that any are particularly successful. They chiefly consist of warm, stimulating oily substances, to increase apparently the circulation through the bulb, and probably to check the perspiration." (PARR's *Medical Dictionary.*)

HARE AND HARE-SOUP are classed among the fibrinous aliments; and being nutritious in themselves, and generally cooked with the addition of various stimulant condiments, they should be avoided in diseases of excitement, and used cautiously in the diet of convalescents.

HARE-LIP. A division in the upper lip, with which some children are born. The division is sometimes confined to the skin and muscles of the lip, but in other cases it extends to the palate-bone and the soft parts of the mouth. It is a deformity which parents are very anxious to get rid of, and it is done without a great deal of pain or difficulty; but it is proper to wait till the child is a few years old, and able to give a little assistance by its own steadiness. The operation consists in removing the skin from the two surfaces, and bringing and keeping the two raw edges in contact; when the opposite sides grow together perfectly, and hardly a scar remains. Adhesive plaster will not do to keep them in contact, but it must be done by two or three gold pins pushed from one side to the other, and kept firm by thread or silk twisted round them in the figure of 8. In three days they may be removed, and the cure will be complete. This is the course of things in favourable circumstances; but sometimes there are two or more clefts which require separate operations, and one should be healed before the cure of the other is attempted. When the palate bone is divided, the cure cannot be accomplished, and the voice is defective from the wrong conformation of the roof of the mouth, and swallowing is difficult on account of the food getting up into the nose.

HARROWGATE WATER. Harrowgate in Yorkshire possesses two kinds of valuable springs, chalybeate and sulphureous. The smell of the sulphureous is strong and fetid, like bilge water. The taste is bitter, nauseous, and strongly saline. It contains sulphur, sulphuretted hydrogen, carbonic acid, and azotic gas. The water excites a headach and giddiness when it is first drank, then a purgative operation, which is speedy and mild, without griping. This water is used in various diseases, particularly of the alimentary canal, and irregularity of the biliary system. Under its use, the health and appetite improve; and both from its purgative effects, and the circumstances in which it is drank, it is very beneficial in costiveness and hypochondriasis. Harrowgate water has been much employed in cutaneous diseases, both internally and externally; and from its aperient qualities it is good in hæmorrhoidal affections. The quantity to be used is a half pint taken in the morning, and repeated three or four times a-day, till some sensible effect is produced on the bowels, and it is in many cases necessary to continue this course for several months. The patient, on his arrival at Harrowgate, should follow certain measures preparatory to drinking the water. A person of sanguine temperament, or who is plethoric, should lose a little blood, and should take a dose of calomel, with the extract of colocynth, followed up by senna or sulphate of magnesia. The patient should rise early and drink the water at the well. If its aperient effect is wished to take place speedily, it is better the whole quantity should be drank before breakfast; but if it is to be used as an alterative, part may be taken before breakfast, and part in the middle of the day. To render the

water less nauseous to the palate, a little spiced gingerbread or brown bread may be eaten at the time of using it. A full course of the water requires from four to six weeks; and its good effects on those who have suffered from torpor of the bowels, continues for a considerable time after they have left off drinking the water; and as it is capable of being carried to a distance without losing its virtues, its use may be resumed when it is thought proper. The use of the water in gravel is likely to be attended with advantage. Harrowgate water is not only much used internally, but also as a bath. The same preparation is necessary as before the internal use of the water, as it stimulates the surface and excites the system more than the common bath. It is in general best to take the bath at night, shortly before going to bed; and if a good degree of perspiration is wanted, some warm diluent drinks, as tea or gruel, may be taken. If a less degree of action of the skin is wished, the bath may be taken earlier; but exposure to the night air should be avoided. When used for gout or rheumatism, or for the improvement of the general health, the time of bathing may be an hour and a half before dinner. Besides wiping the skin perfectly dry, it should be well rubbed, especially when it is the seat of complaint. The heat should be about 95°, and be regulated by the thermometer. The time of remaining in the bath should be twenty-five minutes for skin diseases, and ten for other purposes.

The saline chalybeate spring at Harrowgate possesses an excellent combination of saline ingredients, and of oxide of iron held in solution by carbonic acid. It should be used entirely for its chalybeate effects, and the bowels must be kept open by other laxative medicines, as an aloetic pill or two at bed-time. There is a good deal of interesting scenery about Harrowgate and its vicinity; the air is bracing, and well fitted to improve the health of invalids; and the sulphuretted and chalybeate springs seem worthy of the reputation they have acquired.

HARTFELL WATER. Hartfell is a mineral well near Moffat; it contains iron dissolved by sulphuric acid, and is much celebrated in scrofulous and cutaneous diseases. It is used as an external application, as well as drank internally. The effects of this water at first, are a degree of drowsiness, giddiness, and pain in the head, which soon go off. The dose of the water should not be very large, as it is apt to be rejected by the stomach when taken in too large quantity, and may occasion griping of the bowels. About an English pint a-day will be sufficient. When the stomach is very delicate, the water may be a little warmed.

HARTSHORN or AMMONIA, the volatile alkali, so called because one way of procuring it is to burn the horns of the hart or deer. It is an excellent pungent and diffusible stimulant, and in various shapes and combinations is much used in medicine. In fainting-fits, the carbonate of ammonia is used as smelling salts; in sore throat, united to oil, it forms the volatile liniment, an excellent external application; and in circumstances of great lowness and debility, it is to be given internally in combination with alcohol and aromatics. *See* AMMONIA.

HEAD. The head, besides possessing muscular parts and integuments in common with the rest of the body, is the seat of the organs of the external senses, and of the bony cavity in which the brain is placed. This variety of structures and of the functions which are performed by them, renders the head liable to many diseases, of which some affect the skin, muscles, and cellular texture, others the organs of sense, and others the brain and internal parts of the skull. The head is liable to all the varieties of external injury, of wounds of the scalp, and fractures of the skull; the organs of sense to their peculiar maladies; and the brain and the internal parts to very many diseases. In an important work with which our profession has been favoured by Dr. Abercrombie, he classes the diseases of the internal parts of the head under the in-

flammatory, the apoplectic, and the organic. *See* APOPLEXY; BRAIN, *Inflammation of; Compression and Concussion of;* EPILEPSY; HEADACH; SKULL, &c.

HEAD, WATER IN THE, *Hydrocephalus Internus.* A frequent disease in young subjects, of a very fatal and melancholy termination; or rather, the concluding symptoms of a previous disease, which symptoms, from their frequency, from the severity of suffering which they occasion, and from the hopeless state into which they bring the patient, constitute one of the most dangerous diseases to which children are liable. The commencement of the disease is marked by a considerable degree of fever, by thirst, restlessness, and vomiting; and when the patient is old enough to give an account of his sensations, by complaint of very severe pain of the head. He utters frequent piercing screams; he appears flushed in the face, there is redness of the eyes, but delirium is less frequent than we might expect. If these symptoms are not relieved by the remedies employed, they are succeeded by those which more decisively show the presence of water in the ventricles of the brain. The patient is now dull and heavy, has a constant desire to keep the head in a reclining posture, or rolls it about from side to side, or frequently puts up the hand to the head; the breathing is heavy, the pulse intermitting and very slow, the eyes squint and are insensible to the impression of light, the bowels are costive, the urine scanty, and the discharges are made involuntarily; the patient lies in a dosing state, interrupted only by occasional lamentable shrieks. This distressing hopeless state may continue for several weeks; towards the fatal termination the pulse becomes again exceedingly frequent, feverish heat of the skin again prevails; and convulsions of the whole body or of some particular muscles, or palsy of one half of the body, give notice of the near approach of death. From the preceding description of symptoms, it appears that the commencement of the disease is of an inflammatory nature; and the subsequent symptoms, combined with the knowledge acquired by examination of the bodies of those who have died of the disease, show that there is pressure on the brain, from fluid accumulating in certain parts of it, which, in the healthy state, are free from such fluid.

Causes. The delicacy of the constitution in childhood, renders it liable to be affected by a very great variety of causes, which grown up people are exposed to with impunity; and certain circumstances peculiar to early life increase the number of these hurtful agents. The extreme readiness with which the stomach and bowels of children are put out of order, their susceptibility to all mental emotions, and the relative largeness of their heads, with the quantity of blood sent to the head in order to its speedy growth, all give a tendency to disease in the brain, and its appendages. There are certain temperaments and hereditary peculiarities which seem to predispose to water in the head. Children of a delicate make, of ingenious talents and amiable character, whose early advances in knowledge and in virtue give the fairest hopes of mature and distinguished excellence, are too often those, who, by this fatal disorder, disappoint the fondest hopes of their friends. An eruption behind the ears too suddenly dried up, an occasional irregularity in diet, neglect of the bowels, a fall or blow upon the head, teething, and many other circumstances are exciting causes of the disease. A scrofulous habit seems more especially liable to water in the head.

Treatment. In the acute or commencing stage, we are to use with great diligence the means for lessening inflammatory action. Leeches are to be applied to the head, purging is to be actively employed; and cold water, or vinegar and water, to wash the head and temples. If there is any appearance of stupor or palsy coming on, the head must be shaved and a large blister applied. When the disease has got to the stage where there is reason to fear that the effusion of water has taken place, many remedies have been

applied, but unhappily they are in general attended with very bad success. Mercury has been pushed to a great extent, both by rubbing in, and in the form of calomel. A succession of blisters, or an issue has also been tried. To relieve the pain and restlessness, opiates may be cautiously given, remembering the danger that there is, of increasing the costiveness and inclination to stupor.

We must not be induced, by the supposed incurable nature of water in the head, to be negligent in the use of remedies, when the symptoms of that disease appear. It is an undoubted fact, that children have been afflicted with headach, with stupor, dilated pupils, squinting, and every bad symptom, and yet, by very active treatment, especially by repeated strong purging, they have recovered. All our knowledge of the brain, both in its healthy and morbid state, forbids us to suppose that when water is effused in such quantity as to press upon the brain, and produce the foregoing symptoms, it will ever be carried away by absorption; and, therefore, though we cannot say that water in the head has been cured, we may say, that symptoms very like it may be got the better of. In such cases, our most rational hope is in blistering and purging; and the quantity and strength of medicine necessary in such cases is truly astonishing. From three to five grains of aloes may be given night and morning for two or three days; this is to be worked off by a full dose of senna, or tamarinds and senna, or by a dose of Epsom salts.

When one or two children of a family have died of water in the head, it naturally begets a very anxious solicitude about the rest; and it is found to be a very useful precaution, to begin at a very early age, to make an issue in the neck or other convenient place. Many families have brought safely up to manhood, numerous children, who in all probability would have died in infancy, had not this expedient been resorted to. Great care should be taken of the health of ingenious, delicate, and sensible children. If their parents' fortune admit of it, no expense should be spared in procuring for them the most virtuous, well-informed, and sensible persons that can be procured, for directing their education, and watching over their minds; their treatment should be tender, yet firm and consistent; no harsh usage, and especially no blows about the head, should be permitted; and every indulgence that will not injure the health, the temper, or the character, should be allowed them.

HEADACH. Pain, heaviness, or oppression about the head is a very frequent occurrence, and arises from a great variety of causes. It is symptomatic of disorders of the stomach and bowels; and in such cases it often proceeds to a very distressing height. We judge headach to arise from disorders of the stomach when the tongue is whitish, and slightly coated, with the edges of a pale red colour. The patient has a dimness and indistinctness of sight; he has a dull pain or weight in the head, with some confusion, and he is somewhat giddy. The pulse is languid and feeble, but not very frequent. There is a degree of sickness and irritation about the stomach. There is a coldness and numbness about the fingers; and the patient becomes, what, in common language, is called *nervous*. This kind of headach commonly occurs in the early stages of digestion. It is best relieved by an emetic, but this is a remedy which should not be employed very often.

There is an oppressive illness, called *Sick Headach*, which occurs rather longer after taking food, and when the disordered digestion is principally in the upper part of the bowels, beyond the stomach. The tongue, in this case, is covered with a yellowish white fur. The pulse is languid, but of the natural frequency: vomiting rarely occurs, though there is sickness. The pain of the head is very severe; there is the appearance of bright objects before the eyes; there is also giddiness, weight and stiffness of the eye-balls. The body is chill, and the hands and feet are cold and damp. There is usually

flatulence, and a sensation of inactivity in the bowels, as if there were a weight and stoppage in them. The stools vary much in their appearance; sometimes there seems to be too much bile, at other times they are of a faint yellow colour, or a dark greenish brown. Purgatives of calomel, aloes, jalap, colocynth, followed up by doses of neutral salts, commonly give relief in this kind of headach. *See* STOMACH COMPLAINTS.

Headach is the forerunner or warner of apoplexy, of epilepsy, and of other disorders arising from too great a flow of blood to the head. We judge the headach to be of this kind, when there are marks of fulness present in the system, when the pulse is full and oppressed, when there is throbbing in the arteries generally, and especially in those about the head; when the eyes are red and full. All these symptoms are loud admonitions that blood must be taken away, cooling purgatives administered, and full living altogether avoided. Costiveness very frequently induces this kind of headach.

Headach, and that of the most distressing kind, accompanies organic disease within the brain, or in the bones of the skull. We suspect this to be the case, when the pain is constant, confined to one spot, and accompanied at times by darting pains. Little can be done beyond palliating symptoms, preventing too great fulness or flow of blood to the head, and keeping off all exciting or agitating occurrences; at the same time, attending carefully to the bowels and the diet.

But many persons are subject to headach as an original complaint, uncombined with fever, fulness of blood, costiveness, stomach complaints, or any other affection that we can detect. Some are afflicted for very great periods with headach, rendering their life a long disease. Few disorders are more unmanageable than this habitual nervous headach; and he must be a bold or rather rash practitioner who will undertake to cure it. Numberless are the remedies which have been tried; and in the present state of our knowledge, we are obliged to go the round of many articles, and that with very little success. Some general directions may be given. Great attention should be paid to the bowels and digestive organs; occasional purgatives should be taken; and it is a useful one to begin with, to take a grain or two of calomel or of the blue mercurial pill. The food taken by those subject to headach, should be nutritive, but easily digestible; and attention must be paid to keep the temperature of the body in an equable state, and to avoid having the feet exposed to cold and damp. When the headach has come on severely, ammonia, or musk, or ether may be tried; and sometimes relief, at least temporary, is obtained by holding ether close to the head with the palm of the hand, and then allowing it to produce a great degree of cold by evaporation. In periodical headachs, the use of bark has been recommended, from its success in intermittent fevers; and another medicine, also useful in intermittents, has been given, notwithstanding its dangerous activity. The medicine to which we allude is arsenic; which, of course, no patient would think of taking at his own hands, nor from any but a prudent and skilful physician. Sometimes the headachs which have tormented a person for many years, return no more; probably from some change spontaneously taking place in the nervous system, the nature and causes of which change we are unable to explain.

HEALTH is that state of the human body, whether its growth be completed or not, in which the structure of the parts is sound, and their functions properly performed; rendering the individual fit for all the duties and enjoyments of life. When a person has received a sound constitution from nature, its health is to be preserved by a proper regulation of the various circumstances, internal and external, on which animal life is dependent. These are principally food and drink, the excretions and discharges, air and exercise, sleep and waking, and

the management of the passions of the mind.

The variety of temperaments or constitutions renders it possible for the phenomena of health to be very different in different persons; and what would preserve the health of one would occasion disease in another. Persons of a *sanguine* temperament, whose vessels are full, and whose fibres are firm and active, easily excited to motion, and often to irregular actions, bear evacuations well; and have their health best promoted by abstinence and low living, by avoiding excess of every kind, and particularly guarding against cold after active bodily exertions. The *bilious* temperament is distinguished by equal strength and activity with the sanguine, but by a yellow hue on the skin, and red hair; with a constitution often more acutely sensible, always more irritable. They require the same precautions as the sanguine; but the evacuations best adapted, which are indeed almost indispensable to this kind of constitution, are the free and frequent use of the milder laxatives. To preserve the health of the *melancholic*, whose complexion is dark, and whose powers are torpid, whose mind is dull, but persevering, they should use exercise to assist digestion and to determine to the skin; they should occasionally aid the torpor of the bowels by purgatives of the aloetic kind; their occupations and amusements should be varied and interesting to the mind. The *phlegmatic* temperament is pale in complexion, languid in its exertions; the vessels, if full, are torpid, the constitution inactive; the mind not easily excited to exertion. Their diet requires to be nutritive and somewhat stimulating, though it ought not to go the length of what would be called high living; a suitable proportion of wine should be allowed to them, but never to excess; and their health is merely preserved by what would excite fever in the sanguine or bilious. They should keep the bowels easy, but not be much purged, for they do not bear evacuations well, especially of blood; and they should use constant, regular exercise in the open air. These observations may appear to savour too much of the exploded pathology of other times, when all the phenomena of health and disease were considered to depend on the predominance of certain humours, as the phlegm, the blood, the yellow and the black bile. In all these speculations the ancients were unquestionably wrong; but the different temperaments and appearances of men are sufficiently obvious to the most careless observer; and the terms which are employed to express these varieties may now be used without regard to their original derivation, and without occasioning any material error.

The health of women has some peculiarities arising from the delicacy of their frame, the monthly discharge, the state of pregnancy, and of nursing. All these circumstances constitute a condition very different from the robust and vigorous strength of man in the prime of life; yet equally perfect, relatively to the sex and the individual. Such functions require, for their healthy performance, the attentions peculiar to themselves. The irritability of infants, and the mobility of boyhood are consistent with good health, though they would be unsuitable at a more advanced period of life.

Health varies in people of different occupations. The acuteness of the senses which is necessary in some employments, would be morbid in persons otherwise engaged. There is a state of vigour and perfection of the different faculties, with great muscular strength, which is often spoken of as a state of *high health*; but, as Celsus says, a person so circumstanced, should look with a jealous eye on his attainments. Such a state is incapable of remaining at its acmé; the balance is so nicely poised that a very little external agency or incautious conduct readily excites some disease. This state of extreme muscular vigour is sometimes artificially induced for the brutal purpose of prize-fighting, and the method of doing this is called *training*.

The foregoing remarks on what constitutes health in different individuals, are principally applicable to those whose constitutions, though varying from one another, may all be considered as sound. But some have various diseases or predispositions to diseases, either derived from parents or acquired in the progress of life, which render health with them only a comparative term. The scrofulous can hardly be said in strictness ever to be in perfect health; but their disease may be dormant; and in favourable circumstances, may permit the subject of it to enjoy an exemption from pain and inconvenience, to the end of a long life. Gouty patients may also enjoy good health during the intervals of their attacks. The rules for preserving health will be found under a variety of articles throughout this work, as AIR, EXERCISE, DIET, MEALS, SLEEP, COSTIVENESS, &c.

HEART. The heart of man and of the more perfect animals is composed of two cavities, one of which is destined to propel the blood into the lungs, and the other to distribute it to the system at large. It is contained within the *pericardium*, a strong membranous bag, smooth and lubricated by fluid on the inside, having its inner lamina reflected over the heart itself. The heart is situated obliquely in the middle of the breast, its posterior surface is flat, and lies upon the diaphragm: its apex is turned forwards, and towards the left side, so that, in the living body, it is felt striking between the fifth and sixth ribs, a little towards the side of the breast-bone. The pulmonic part of the heart is composed of an *auricle* and a *ventricle*. The auricle is a muscular bag, very thin, and having a dark appearance, from the blood shining through its coats. Into this cavity the two large veins which have collected the blood from the upper and lower parts of the body empty themselves; the auricle contracting sends the blood into the right ventricle, which propels it through the pulmonary artery into the lungs. There circulating in innumerable vessels, and exposed to the influence of the air we breathe, the dark purple blood is changed to a bright scarlet colour, loses the noxious properties it acquires by flowing through the system, and becomes again fitted to circulate as before. The blood proceeds from the lungs by four vessels into the *left* auricle, which, like its fellow, is a muscular bag that contracts and sends the blood into the left ventricle, by which it is sent into the aorta and its branches through the body. To prevent the blood from regurgitating, and to keep it flowing in the proper direction, both the auricles are furnished with valves, or little membranous folds, which allow the blood to pass one way, but are accurately closed when any of it attempts to pass in the opposite. At the mouths of the pulmonary artery and of the aorta, there are also valves, for the same purpose. The valves of the right auricle are called the tricuspid valves, those of the left the mitral; those at the beginning of the arteries are called semilunar valves. The walls of those various cavities are strong and muscular, and are furnished with bundles of muscular fibres, which pass from one part of them to another, and which, independent of our will, contract when they receive the stimulus of the blood. When the auricles are fully distended by the returning blood, they throw it into the ventricles; which, when they are filled, throw the blood into their respective arteries. The contractions are called the systole, and the dilatations the diastole of the heart. The beating of the pulse corresponds with the force and frequency of the movements of the heart. This astonishing organ contracts and dilates upwards of a hundred thousand times in a day, and can continue its action unimpaired and unwearied for seventy or eighty years.

HEART, DISEASES OF. The heart is subject to various diseases both of the structure and function. Indeed the alteration of its structure necessarily leads to irregularity of its action: "The most severe and the most frequent diseases of

the heart, are dilatation of the ventricles, thickening of their walls, and the combination of these two states. The continuance of the *foramen ovale* after birth, perforation of the ventricular *septum*, ossification of the sigmoid valves of the aorta, or of the mitral valve, excrescences growing from these valves, productions of different nature which may be formed in the heart, are affections much less frequent; and which generally disorder the health, only when they attain a degree of intensity sufficient to produce hypertrophy or dilatation of the ventricles. Dilatation or hypertrophy of the auricles, still less frequent, are perhaps, always consecutive affections, produced by a morbid state of the valves, or of the ventricles. Of all these diseases, the general symptoms are nearly the same. Respiration habitually short and constrained; palpitations and stiflings invariably produced by the motion of ascent, by rapid walking, by mental emotions, and returning even without known cause; frightful dreams, and interruption of the sleep by sudden startings; occasionally the symptoms described under the name of *angina pectoris;* and, lastly, a cachectic paleness, with tendency to leucophlegmatic effusion, which eventually appears, are all symptoms which, to a greater or less extent, occur in persons affected with disease of the heart. In an extreme degree, the symptoms are still more obvious. Incapable of bearing the horizontal position, the patient seated rather than lying in bed, with his head inclined on his chest, or thrown back on the pillow, retains this position night and day; his face, more or less swollen, is sometimes pale, but, most generally, has a deep violet tint, diffuse, or confined to the cheeks; the lips, swelled and prominent like those of the negro, are most intensely livid, even when the face is pale; the lower extremities, the scrotum, the labia in females, the integuments of the trunk, the arms and the face even are successively affected with œdematous infiltration. Great derangement of the capillary circulation is denoted by dyspnœa, oppressed breathing, and hæmoptysis; racking pains of the stomach, amounting sometimes to vomiting; and finally lethargic stupor, coma, and apoplectic seizure, which too often terminates at once the disease and the life of the patient." *(Edinburgh Medical Journal, October* 1826.)

I. *Alteration of the structure of the* HEART. 1. *Hypertrophy*, or excessive nutrition, (*active aneurism* of the heart,) consists in increased thickness of its muscular substance, without enlargement in the capacity of the cavities. The substance of the organ is in general firmer than natural. It may exist in one ventricle only, or extend to both, and it may be general or partial. This disease very frequently induces apoplexy. 2. *Dilatation* of the ventricles *(passive aneurism)* consists in enlargement of the cavities of the heart, with thinning of their walls. The muscular substance is at the same time unusually soft, sometimes of a violet colour, in other instances pale, and almost yellowish. The most general and powerful cause of this is original conformation. 3. The substance of the heart is *altered in its texture*, sometimes becoming peculiarly firm, at other times soft and flabby. 4. *Ossification* of the tricuspid and semilunar valves is very rare, but that of the mitral or semilunar aortic valves is very common. It appears in general, first in the substance of the base of the valve, and then pierces the covering membrane, so as to render the surface of the valve rough and prominent. Eventually it may affect the margin of the valve, when it produces extreme contraction of the opening. A slight degree of this disease may occur without much derangement in the action of the heart, and serious disorder of the health. 5. *Inflammation of the Heart or Pericardium.* It occurs in various forms, sometimes with acute pain referred to the pit of the stomach, quick and short breathing, with extreme anxiety and restlessness, pulse very quick; sometimes cough attends.

Diseases of the heart are difficult to be distinguished, or to be cured when they are known to be present. Modern physicians consider themselves as having the means of ascertaining their presence by the stethoscope, a wooden cylinder, which, when placed upon any part of the chest, gives a different sensation to the ear of the examiner, according as it is in a healthy state or affected with varieties of disease. By comparing these different sounds imparted in health, with the appearances observed when there is an opportunity of examining the dead body, they hope in time to obtain a tolerably correct pathology of the diseases of the lungs and heart.

II. *Irregularities in the Action of the* HEART. These are principally irregularities of pulsation, intermission, and palpitation. 1. *Irregularity of Pulsation.* This may consist either in variation of the frequency of the beats, or in one or more very strong beats, in the midst of regular ones. 2. *Intermission* may either be owing to an actual cessation of the heart's action, or to the contractions being too feeble to communicate their impulse to the arteries. 3. *Palpitation.* This is an affection in which the motion of the heart is performed with greater rapidity, and more force than usual; and the patient is affected with difficulty of breathing, with great anxiety, and various uneasy and painful sensations. It arises from various causes, as from violent exercise, from diseases of the heart itself, or of the great vessels; from emotions of the mind, and from the circumstances which occasion fainting fits. The cure must be very much regulated by what we judge to be the cause. Many of these are quite beyond our reach; and all that we can do is to direct a careful avoidance of whatever tends to quicken the circulation, as violent exercise, or going quickly up a height, or over distending the stomach; and also to prescribe occasional small bleedings, and such diet as will not occasion fulness of the habit, or give any tendency to inflammatory symptoms. Something may be done by moral management endeavouring not to let the mind be easily ruffled or harassed, by the sudden and often small accidents, that are so apt to overset the tranquillity of those who do not exert themselves to keep a well-balanced mind.

HEARTBURN. A disagreeable sensation proceeding from acidity in the stomach, from which there are frequent belchings of sour flatulence, or discharges of water with a burning heat at the pit of the stomach. It is a very pertinacious symptom, and is not easily removed; it has its chance of abatement or cure like the other symptoms of indigestion, by air, exercise, and proper diet; but it is also to be palliated by giving such substances as will combine with an acid in the stomach, and form a tasteless and innoxious salt. These consist of what are called absorbent earths, principally lime, in the form of lime-water or chalk, and magnesia either calcined or united with carbonic acid. The lime is to be preferred if the bowels be too open, and the magnesia if they be costive. The articles of diet, which are found by experience to produce heartburn, will be avoided by a patient who prefers long ease to transient gratification; and therefore butter, pastry, port wine, cheese, and various articles which every one must ascertain for himself, are to be avoided.

HEAT. The investigation of the effects of heat on inanimate bodies, as also the mode of its production in animals, comes within the province of the chemist. (*See* ANIMAL HEAT.) The heat of the human body in ordinary circumstances, is generally 97° or 98° of Fahrenheit's thermometer; and as different substances receive heat with different degrees of celerity, the choice of clothing in different climates, for the purpose of keeping the temperature of our bodies in an equable state, is to be regulated by the conducting power of the materials used. Fine lint, cotton, wool, down, and fur, are bad conductors of heat, and therefore are used as clothing; they do not possess warmth

themselves, but merely prevent the air from taking caloric from our bodies. In feverish diseases, the heat rises several degrees higher than in health, and in scarlet fever it has been observed so high as 109°. The effects of heat, when long continued, are to induce relaxation and debility; and in warm climates and seasons, heat seems to act very powerfully on the biliary system, giving rise to liver diseases, both acute and chronic, diarrhœa, cholera, and remittent fevers.

Heat is usefully applied in a variety of ways for the mitigation of pain and disease. It acts as an antispasmodic, and, as such, is applied in griping and pain of the bowels, either by hot dry flannels, by fomentations, or the warm bath. Poultices act in the ripening of abscesses, principally by keeping up an increased heat in the part; and therefore, they should be put on as warm as the patient can bear, and be frequently renewed.

HECTIC FEVER. This is a slow, long continued fever, attended with wasting and great debility. It is commonly symptomatic of some other disease, and is believed to be connected with suppuration, and the absorption of purulent matter. Intemperate drinkers, and those who indulge in excess of any kind, are very subject to it; and disordered glands, abscesses, or ulcers in the internal parts, generally induce it; but these abscesses sometimes exist without a hectic; and the liver, sometimes even the lungs, are found ulcerated, when no fever had been observed. The matter producing hectic may be formed in any part of the body, though perhaps in the lungs, and the glands of the mesentery, its source may be most commonly traced. The hectic arising from external inflammations and suppurations is longer in its attack, and slower in its progress, in proportion to the magnitude and importance of the part. Thus, in the joints, the usual seats of the disease, suppurations of the ankle, wrist, elbow, and even the shoulder, have often continued long before the constitution has suffered. On the contrary, when the knee, the hip-joint, or the loins, are the seat of the disease, hectic soon comes on. During the continuance of wounds, it sometimes comes on, and is then attended with every mark of debility. Many authors have contended, that hectics are not owing to the absorption of purulent matter; and their arguments are entitled to considerable attention. The connexion between hectic and suppuration is, however, apparently so close, that we are unwilling to give up our former opinion; and we can perceive, we think, some clue to conduct us through the labyrinth of discordant facts. We would conclude, therefore, that hectic is owing to suppuration of any considerable magnitude, arising from constitutional disease; and these constitutional diseases are such as are usually attended with increased irritability, or a broken constitution. As hectic is so universal an accompaniment of consumption of the lungs, we have described its symptoms under that article, in page 145. "In most cases of hectic fever, the principal intention is to relieve the symptoms, to moderate the heat, prevent costiveness, or its opposite, check the night sweats; and at the same time assist the general health, by exercise, air, and a proper diet; in other words, to support the strength without adding any stimulus. (Dr. PARR.) *See* CONSUMPTION.

"A distinction should be made between a hectic fever arising entirely from a local complaint in a good constitution, which is only disturbed by too great an irritation; and a hectic fever arising principally from the badness of the constitution, which does not dispose the parts to heal. In the first species, it is only necessary to remove the part (if removable), and then all will do well; but in the second, nothing is gained by a removal of the part, unless the wound made in the operation is much less, and more easily put into a local method of cure, by reason of which the constitution sinks less, under this state, and the operation together, than under the former one. Here the nicest discrimination is requisite. (Mr. JOHN HUNTER.)

HELLEBORE, *Helleborus niger*, a medicine famous in classical antiquity for being used in the cure of madness. It is the root of a plant that grows in the Pyrenees and Appenines. It is a violent purgative and emetic; but whatever may be its powers, we can produce equal effects by milder and more manageable substances, and hellebore accordingly is, neither in madness nor for any other purpose, in much estimation in modern practice, though some think it useful in promoting the monthly discharge, and in procuring a copious flow of water in dropsical cases.

HEMICRANIA. *See* MEGRIM.

HEMIPLEGIA, a species of palsy, in which one half of the body, in a line from head to foot, is palsied. It very frequently follows a stroke of apoplexy. The cure is to be attempted by bleeding, by purging, by blistering, by stimulating liniments, as detailed under the articles APOPLEXY and PALSY.

HEMLOCK, *Conium maculatum*, a plant growing very commonly about the sides of fields, under hedges, and in moist shady places. It is very poisonous, but more so in spring than in autumn. When taken in an over-dose, it produces giddiness, dimness of sight, sickness, tremors, and palsy. But in small doses it may be used safely, and it is capable of being so managed as to prove a valuable anodyne and narcotic. It is a good palliative in pulmonary irritation, and is much used in cases of schirrus and cancer, but with no good effects beyond those of a narcotic. When applied externally, in the form of fomentation or cataplasm, it affords considerable relief in irritable ulcers. It is used internally in the form of inspissated juice or extract as it is called, in the dose of one grain to five; and the powdered leaves have been given in the dose of two grains, gradually increasing to twenty. It is thought to have the narcotic, without the constipating effects of opium; but this valuable property belongs more indisputably to the plant which forms the subject of our next article.

HENBANE, *Hyoscyamus niger*. A common plant, whose leaves have a peculiar nauseous odour, and a bitter taste. Its properties are those of an anodyne, and it has great resemblance to opium in all its effects, with the favourable exception, that it does not, like opium, render the bowels costive. Its doses require to be a little larger than those of opium; of the tincture, from half a drachm to a drachm may be given, and of the extract from five grains to fifteen. In over doses, it brings on symptoms like those brought on by hemlock. The infusion, or the solution of the extract, when applied to the eye, causes the dilatation of the pupil. Mr. Brande says he has found henbane of much service in allaying the irritation occasioned by red sand in the kidneys; and it is found that hyoscyamus, combined with colocynth, takes off the griping tendency of the latter, without impairing its purgative effects.

HERNIA. *See* RUPTURE.

HERPES, a disease of the skin. *See* RINGWORM and SHINGLES.

HERRINGS. A fish found in great abundance in our northern seas, and forming a very plentiful and excellent article of diet. Herrings are eaten either fresh or salted; or dried in smoke, when they are called red herrings. They abound in oily matter, and some stomachs find considerable difficulty in digesting them.

HICCUP. A convulsive action of the diaphragm. It occurs very frequently, and goes off without any inconvenience; it is sometimes troublesome as a symptom of hysterics; but at the end of fevers or other diseases, or when accompanying injuries of the head or wounds any where, it is to be regarded as a sign of extreme danger. The common hiccup may be removed by a draught of cold water, or vinegar and water or a little hartshorn, or a fright or other sudden mental emotion. In hysterics, a solution of assafetida or any thing having a strong smell and taste will relieve it; but in the symptomatic hiccup, little can be done, as it is too frequently the forerunner of death.

HIP-JOINT. The hip-joint is formed between the broad flat bone at the lower part of the trunk and the thigh-bone. The thigh-bone has a large smooth round head, which is received into the *acetabulum*, a deep socket in the haunch-bone; here it has a secure and extensive play, and can be moved to every side; but is restrained in its motion outwards by the high brims of the cavity, and by the round ligament, which is extended from a rough spongy pit in the head of the thigh-bone, to the lower internal part of the receiving cavity. The hip-joint is liable to dislocation, and to the disease which forms the subject of the following article.

HIP-DISEASE. This affection is attended with considerable suffering; and, in many cases, it ends either in death or lameness. It most frequently attacks children under the age of fourteen; and generally, though not always, seems connected with scrofula. It comes on in a very insidious manner, beginning with a slight weakness and limping of the affected limb. These symptoms for a time attract but little attention; and are passed by as growing pains or rheumatic affections, and as there is often an uneasiness at the knee, it is supposed that the principal complaint is there, and remedies are there applied accordingly. These remedies, though in themselves they do little harm, are bad, as they lead to the neglect of those measures which would be of service in the first stage of the hip-disease, but which would do little good at a more advanced period. Besides this pain in the knee, there is often a pain in the groin; and this contributes to mislead the inexperienced practitioner still further from the real state of the disease. The symptoms which characterise the disease of the hip-joint when fairly present, are, a degree of emaciation of the leg and thigh, great pain when pressure is made on the front of the joint; the patient limps in walking, and there is a remarkable lengthening of the limb. The buttocks lose their natural fulness, and appear somewhat flattened. Though the patient complains of pain about the knee, he can bear to have it moved about, but cannot suffer the same motion of the thigh without very great pain. The patient instinctively finds out the posture which gives him least pain, and this is by leaning the weight of the body chiefly upon the opposite limb, while the thigh of the affected side is bent a little forward. The symptoms above detailed indicate the presence of inflammation; and if this is not checked, the next stage, or the formation of matter comes on. Sometimes there is swelling and redness of the skin, and a degree of inflammatory fever; at other times, matter forms without any very evident inflammatory symptoms, and without showing itself by any fulness externally. The limb after some time is not longer, but shorter than the other; the toes are turned inwards, and the leg is bent; while the thigh-bone is pushed upwards and outwards in consequence of the destruction of the cartilages and ligaments, which should keep it in its proper cavity. When the disease of the hip-joint has existed for some time, it very generally brings on hectic fever; though, in some cases, the health remains unaffected for a considerable period.

Causes. The disease of the hip-joint may be occasioned by external violence, as blows or falls; by exposure to cold or damp, or by lying on the damp ground; it occurs in scrofulous constitutions, but often appears without its being possible to assign any cause for it.

Treatment. In the early part of the disease, we are to enjoin complete rest, fomentations to the part, topical bleedings, especially cupping. Such treatment is more particularly proper, when the symptoms of active inflammation are present; but when these have abated, the best treatment is to form an issue with caustic, behind and below the part of the thigh-bone which is felt to project at its upper part. The issue should be of the size of a half crown-piece, and will require to be kept open a very long time. Attention is to be paid to the general health; bark,

wine, and nourishing diet are to be given as the strength requires, and the digestive organs and bowels are to be carefully regulated. Sometimes, after long and tedious confinement, the disease is removed; but at other times, either death, from wasting hectic fever, and destructive ulceration, takes place; or the joint becomes stiff and contracted, and the patient is lame for life, though the constitution in general may be in a healthy state.

HOME-SICKNESS, *Nostalgia.* That train of symptoms which occurs in persons at a distance from home, when they are seized with a strong desire of returning to their native land. The Swiss and the inhabitants of other mountainous countries, on whose infant minds the romantic scenery around them has made a strong impression, are generally found to be much affected with this nostalgia; the symptoms of which are, dejection of mind, loss of appetite, emaciation, and derangement of the digestive powers. The cure consists in gratifying, if possible, their desire of revisiting their native place, or of diverting their mind to other objects; attending to the state of the bowels, to proper regimen and exercise, and whatever tends to promote the general health both of body and mind.

HONEY. The production of the bee, which to some persons proves purgative. As this happens but rarely, it is to be ascribed to peculiarity of constitution, and it must be avoided by those in whom it has this bad effect. It is a good vehicle for heavy powders.

HOOPING-COUGH. A well known disease, which attacks persons only once in their lives, and which arises from a peculiar contagion. It begins very generally like a common cold, which, however, does not go off so early as a cold does; but, at the end of a fortnight or three weeks, is accompanied with long and violent fits of coughing, and almost always with vomiting. The long coughing empties the lungs so completely, that the air rushes in, in a convulsive manner, accompanied with a loud crowing noise, called a *hoop*, from which the disease derives its name. In Scotland, the sound is called a *kink*, and the disease *kink-cough*. The worst cases of hooping-cough are those in which the feverish symptoms continue long, where the breathing is difficult and painful, and where the cough is dry, and as it were unformed, without any tendency to vomit at the termination of the fits. In more favourable cases, though the agitation of the body is considerable, though the cough is so violent as even to occasion discharges of blood from the nose, the ears, and even in the eyes, yet so little are children the worse for it, that they return with undiminished alacrity to their play or occupations; and when they get rid of the contents of the stomach by vomiting, the craving for food is strong, and is gratified eagerly. The fits of coughing do not observe any stated intervals for their return. They happen frequently both in the day and night; and as the patient commonly has some warning of their coming on, he seizes hold of any person or thing near him, to support his body during the severe concussion that accompanies the cough. Though the fits of coughing are generally owing to the disease itself, yet they are liable to be brought on by various exciting causes, by any thing irritating the lungs, by violent exercise, by disorders of the stomach, and by emotions of the mind.

Treatment. If the disease is attended by highly inflammatory symptoms, continuing more than four or five days, it will be necessary to resort to active antiphlogistic treatment; taking away blood by leeches or from the arm, according to the age of the patient, and the severity of the symptoms; giving smart purgatives, and avoiding every source of irritation. Blisters are to be applied to the chest, or between the shoulders, and demulcent cough mixtures are to be given. Though the violence of the inflammatory symptoms be subdued, and the disease assume a milder form, we are not to expect it to

be very speedily removed; but must palliate symptoms, and imitate one of the salutary processes of nature which take place in hooping-cough, viz. excite vomiting by occasional emetics. According to Dr. Paris, the sulphate of zinc is administered in spasmodic coughs with the best effects, especially when combined with camphor or myrrh: he gives this formula for its exhibition, ten grains of the sulphate of zinc, powdered myrrh a drachm and a half, made into twenty pills with conserve of roses: two pills to be taken twice a-day. He says that the various quack medicines advertised for the cure of the hooping-cough, are either opiates, or medicines composed of the sulphate of zinc. The nostrum sold under the name of *anti-pertussis*, contains this metallic salt as its principal ingredient. The stomach and bowels are to be carefully regulated; to weakly children, the bark and wine, with nourishing diet, are to be given; and in most cases, it is a necessary measure to change the air, and this very frequently, removing not only from a worse to a better, but even from a better to a worse air. This gives relief to the difficulty of breathing; but a change of air cannot be expected to remove the complaint till after it has lasted a considerable time. It is a very beneficial practice to rub the breast and back with some stimulant or anodyne substance, as camphorated oil, opodeldoc, or some of the preparations of ammonia.

The contagion of hooping-cough affects even very young children, and to them the disease is peculiarly severe and dangerous. The contagion is capable of being carried by the medium of a third person, and appears to be communicable as long as the child has the cough. When the disease has seemingly gone off, it is very easily brought back in all its severity, by exposure to cold, or by an unfavourable turn of the weather; and even for years after, the child, whatever be the nature of its pectoral complaints, has the crowing sound and back-draught of the hooping-cough.

HOPS, *Humulus lupulus*. A creeping plant, much cultivated in the county of Kent for its leafy catkins, which are used in the brewing of ale and porter. Hops are bitter, aromatic, and astringent. Their effects, when added to malt liquors, are to impart an aromatic bitter, and to prevent their becoming sour. Some think that the bitterness given to malt liquors by hops, prevents the bad effects of the sweet wort on the stomach; and that they have also a narcotic tendency. Certainly some kinds of ale and porter dispose many persons to great drowsiness. Hops have been introduced into the Materia Medica for their anodyne virtues, but without any necessity. Some have said that an ointment into which hops enter in the form of tincture or extract, has been of use in allaying the pain of cancer in its last stages, when all other applications have failed. A pillow stuffed with hops has been laid under the head to ensure repose.

HOREHOUND, *Marrubium vulgare*, is a plant of very little use; but there is a patent medicine known by the name of Ford's Balsam of Horehound, which consists of a watery infusion of horehound and liquorice root, with double the proportion of proof spirit or brandy, to which is then added opium, camphor, benzoin, squills, oil of aniseed and honey. It professes to be a remedy for coughs and colds, but, from the number of its stimulating ingredients, its use in the hands of the ignorant must be very dangerous; and regular practitioners have better modes of allaying cough, when they judge it necessary to do so.

HORSE-RADISH, *Cochlearia armoracia*, is a stimulant root, which is sometimes brought to the table grated, to be used as a condiment. It has been applied externally as a rubefacient in palsy and rheumatism; and the infusion taken internally is a good stimulant, and sometimes proves diuretic. By its action on the fauces it relieves hoarseness. It was formerly thought a valuable antiscorbutic, but its properties in this respect are very in-

ferior to cresses and other fresh vegetables.

HUNGER. The well known sensation which is experienced when the stomach is in a healthy condition, and has remained empty for some time. This sensation does not depend on mere emptiness of the stomach; for in various diseases the stomach remains long empty without the sensation being produced; and hunger is allayed by various ways, although no food has been taken. If the usual time of eating is passed, it is not uncommon for the feeling of hunger to go off; and it is quite a familiar occurrence to have the appetite spoiled by the communication of bad news. A narcotic substance applied to the stomach removes the sensation of hunger. The juice of tobacco will have this effect in those who are not accustomed to it. Ardent spirits take away the appetite of those who are not used to them. Hunger does not seem to recur till the aliment already thrown in has been assimilated in the body. It does not, therefore, appear to have a particular reference to the state of the stomach, and in some diseases of the mesenteric glands through which the chyle passes, the appetite is never satisfied, though there is plenty of food in the stomach. Excessive and voracious appetite may depend on some morbid state of the pylorus, by which the food is allowed to pass out of the stomach before it is changed into chyme. The inference drawn from the above facts by Dr. Paris, one of the latest writers on digestion, is, that the several processes by which aliment is converted into blood cannot be performed at the same time, without such an increased expenditure of vital energy as weak persons cannot, without inconvenience, sustain, and that proper time should be allowed for the food to go through all its changes; that the stomach should not be set to work during the last stages of digestion, otherwise the processes will, in weak persons, be much disturbed. It is a well known fact, that if a person be interrupted in his meal for a quarter of an hour, he finds, on resuming it, that his appetite is gone, although he may have not eaten half the quantity which he required. This is explained by supposing, that during the suspension of the meal the food had entered on its ulterior changes, and that the energies of the stomach had therefore declined. The subsidence of appetite is not produced by the quantity, but by the quality of the food; thus showing, that it is not the mere volume of the aliment alone that is necessary to pacify the cravings of the stomach. At the same time, it is equally true, that a certain bulk must be introduced into the stomach for the purposes of good digestion; and hence even the most nutritive soups must have some solid or bulky vehicle or accompaniment, when they are taken into the stomach. Besides the peculiar sensation referred to the stomach when a person is hungry, other symptoms at the same time occur in the constitution. There is a universal lassitude, a sensation of pressure at the pit of the stomach, and much air is heard passing from one part of the intestines to another. When a certain quantity of food has been taken in, the feeling of weariness gives place to that of renewed strength, and all the other phenomena of hunger cease.

HYDATID. An animal formed like a bladder, and filled with a watery fluid. They are found in various cavities of the body of man and other animals, and in different organs, particularly the liver and uterus, and they give rise to a species of encysted dropsy. There does not appear to be any cure for this disease.

HYDRAGOGUE PURGES, such medicines as procure a copious watery discharge by stool. Of this kind are what are called resinous purges, as scammony, gamboge, and the like; also jalap and cream of tartar are hydragogues; and some preparations of mercury may be so managed as to have the same effect. Elaterium is an active, though hazardous hydragogue. The diseases in which medicines of this class are most useful, are

the various kinds of dropsy, especially of the belly; and the relief obtained by several copious watery stools is often surprisingly great.

HYDROCELE. A collection of water in the scrotum, or in the membranes investing the testicle and its vessels. Hydrocele is to be distinguished from the watery swelling which takes place in the cellular substance of the scrotum in general dropsy, and which ought not to be considered as hydrocele at all, but to be treated as part of a more general affection, by the remedies appropriate to that particular disease. Water may be collected in the cells of the spermatic vessels; and while this collection is not very large, the scrotal bag has little or no appearance of disease. If the water accumulates, there is a knotted appearance along the course of the spermatic cord; and the size may become so large and inconvenient as to require the water to be evacuated by an incision. Sometimes, instead of several cells being thus filled with water, it collects in a large one, and requires similar treatment. The more common form of the disease is, when there is an accumulation of water in the common coat of the testicle.

Diagnosis. The gradual collection of this fluid distinguishes the disease from rupture, which forms suddenly; the swelling in rupture disappears on pressure and change of posture, which hydrocele does not; the swelling begins at the upper part in rupture, but from the lower part in hydrocele; besides, if a candle be held behind the swelling, there is a degree of transparency visible.

Cure. The cure of hydrocele is temporary or permanent. The water may be easily evacuated, but it will readily accumulate again, and means must be taken to prevent this. The means most effectual, were it always in our power to execute them, is to excite such a degree of inflammation in the parts, as will cause the outer covering of the testicle to grow to the inner surface of the bag; thus to obliterate the cavity altogether, and leave no space for the accumulation of fluid. Such inflammation is excited by introducing through a syringe, port wine diluted with water to a proper strength, generally two parts of wine to one part of water; but if the liquor be too strong, it may excite so much inflammation as to give rise to general fever, which will require to be treated by blood-letting, both general and local, with purgatives, and cooling lotions.

HYDROPHOBIA, the dread of water. A remarkable symptom, which gives its name to the whole train of painful affections, which arise from the poison introduced by the bite of a mad animal. This poison is commonly inoculated into the body by a small portion of the saliva of the animal. In order to this, the skin must be broken; and a wound incredibly small is sufficient for this purpose. A quantity of saliva so small as to elude our senses, thus introduced by a broken surface, will occasion the whole succession of fatal symptoms which ensue. The animals whose bite most commonly occasions hydrophobia, are the dog and cat; and they can impart the disease both to man and other animals. In the warm season of the year, the hydrophobia most commonly appears; and though nothing should be said to make people negligent of what may prevent the horrid effects of canine madness, yet it may be right to spare unnecessary alarm to any, by remarking, that out of many persons who are bit by dogs, but few are affected with the disease. The bite of a mad dog may not pierce the skin, or the teeth may be dried and cleaned in passing through the clothes, or the saliva may have been expended for a little by attempts at biting other men or animals; or from some peculiarity of constitution, even a person who has really been bit, may not take the disease; of which a remarkable instance is given by Mr. Hunter, who relates, that of twenty persons who were bitten by the same dog, only one was seized with hydrophobia. When the popular terror is excited, every dog, whether mad or not, is supposed to be so, when he shows any signs

of anger; but although such dogs bite, they do not inflict a poisonous wound. The time which elapses between the infliction of the wound and the appearance of the disease is various, but is in some cases astonishingly long; instances, though very rare, have been recorded where a year has elapsed; but from six weeks to two months is a period by no means uncommon.

Symptoms. The symptoms of hydrophobia are the following: The bitten part begins to be painful, then there ensue uneasiness, restlessness, heaviness, a desire to be alone, sudden starting, pain, spasms, disturbed sleep, and frightful dreams. These symptoms increase, pains dart from the wounded place to the throat, with a sensation of choking, and a horror and dread at the sight of liquids. The person can swallow solids, but any thing in a fluid form causes him to start back with horror; and the most painful convulsions are excited by any application of it to his throat or lips. In the course of the disease, vomiting comes on, with much fever, great thirst, dryness and roughness of the tongue, hoarseness, and a continual discharge of saliva. There is great watchfulness, a dislike of light and air, difficult breathing; in some cases, delirium, but in others the judgment is unimpaired. The pulse becomes tremulous and irregular, convulsions arise, and the patient sinks exhausted, about the third or fourth day from the first appearance of the symptoms.

Treatment. Hydrophobia is one of those diseases in which the resources of the medical art almost universally fail. To enumerate all the remedies that have been tried, would be to give a list of the most various and contradictory articles. Cases have got well under several plans, but those applied to others have altogether failed. Large bleedings, cold bathing, warm bathing, wine, opium, musk, and other antispasmodics, ipecacuan, turpentine, potash, vinegar, and a copious assortment of quack medicines, have all been tried in vain. From this view of the case, it must be obvious, that our most anxious care should be directed to the prevention of the disease, since, in the present state of our knowledge, it is absolutely hopeless of cure. For this purpose, nothing is so effectual as completely cutting out the bitten part, and some portion of the surrounding substance, as soon as possible after the injury, wherever the situation of the part will allow of this. The inoculation of the poisonous matter is exactly similar to what takes place in small-pox and cow-pox. A little matter is introduced at an open wound, this excites an action at the part, certain fluids are there formed in consequence, and particular vessels carry these fluids from the part, to the heart and other organs where the fluids are elaborated, and sent to the different parts of the body; and thus any particular taint mixing with the general mass, produces its peculiar disease. But this is not done instantaneously. Some poisons dart with inconceivable rapidity through the body; the viper, the rattlesnake, or the cobra de capello kill with frightful velocity; but the small-pox, the cow-pox, and the poisonous saliva of the dog, take more time to produce their effects on the system. If there be too much blood from the wound made for inoculation, the matter will be washed away, or if it be wiped off, the disease will not follow; and on the same principle, we try to prevent the absorption of the poisonous matter introduced by the dog, by a free cutting out of the wounded part, and by exciting a flow of blood, and discharge of matter. If this be freely and properly done, we have every reason to hope that no bad effects will follow from the bite of the animal. If, notwithstanding, hydrophobia should come on, however hopeless, something should be done; and we must attempt, in the best way we can, to palliate the distressing symptoms. If the patient be furious, care must be taken to prevent him from injuring himself or others; and for this purpose, the best restraint is the strait waistcoat; as the

struggle with other men is always hurtful. Nourishment of a light kind must be given as long as he can swallow, and when this power fails, animal broths must be given by clyster. Costiveness is to be obviated by laxative injections, or by purgative medicines in the form of pills.

As it may sometimes be of consequence, in connexion with this disease, to know whether a dog be really mad, we shall subjoin a few of the marks of the rabid state. There is an alteration in the usual habits of the dog; his appetite is depraved, he is very irritable and treacherous, allowing himself to be fondled, but suddenly snaps or bites without any provocation. The eyes become inflamed, and matter is discharged from the eye-lids. His bark is changed into a howl; he becomes very restless, and desirous to gnaw every thing around him. If he gets loose, he bites all animals that come in his way, especially his own species. He often appears palsied behind, he becomes feeble, his jaws drop, saliva runs from his mouth, and he dies exhausted on the fourth or fifth day.

HYPOCHONDRIA, Vapours, *or* Low Spirits. Though this may be considered principally as a wrong state of the mind, yet as there are certain bodily symptoms conjoined with it, it requires a place in a Dictionary of Medicine. The malady is distinguished by a languor and inactivity of the patients in every purpose or mode of action, a sadness, timidity, and despondency about every subject of thought; and especially a dread of impending evil, and an over anxiety in every thing regarding their own health. They are disposed to attend to the slightest ailment, and obstinately take the most gloomy view of their own case. Persons of this melancholic temperament are generally of torpid bowels; and it is always found, that this state of the bowels has a bad effect on their health and spirits. Their breathing is somewhat slow; they are troubled with flatulencies, and various spasmodic affections. The disease is seldom fatal, but if neglected or improperly treated, it may bring on melancholy, madness, jaundice, vertigo, palsy and apoplexy.

Those who are most subject to hypochondriasis are those of a firm texture of body, of a spare habit, with black hair and eyes; whose mental faculties are grave and reflective; who are timid, and not easily moved, but when any object engages their attention, thoroughly occupied with it.

Diagnosis. Hypochondriasis is nearly allied to several other affections, both of the mind and of the digestive powers. Indigestion, hysterics, and a certain kind and degree of mental derangement have all of them some symptoms in common with it. It is to be distinguished from dyspepsia by this last occurring in persons of every temperament, both the sanguine and the melancholic, by its being often accompanied with sufficient cheerfulness, except under the immediate pressure of suffering; whereas, hypochondriasis is to be considered as a disease chiefly of the melancholic temperament, and depression and gloom of mind is one of its essential symptoms. Hypochondriasis resembles hysteria, in the flatulence, indigestion, and terrifying apprehension with which they are attended. When a person has certain obstinate and absurd notions of himself, as that his legs are made of glass, or that he is hermetically sealed, or that he has no soul, he is to be considered as partially deranged, and not as hypochondriacal.

Treatment. It is a matter of great difficulty properly to treat persons afflicted with low spirits. Physicians who see that there is little or nothing materially wrong in their bodily frame, are too apt to listen with impatience to their long and dismal stories of their own maladies, to treat their complaints with disbelief or ridicule, and to neglect any attempt to relieve them. Hence a characteristic of hypochondriacs is, that they often change their physicians, till they either find one who indulges their fancy, or who is fortunate enough to succeed in curing them. Their complaints should be listened to with sympathy and attention; medicines

ought to be given adapted to any appearance of disease about them; and if there be any harmless medicine or piece of practice in which they have confidence, it should be permitted them. It is of great consequence to keep their mind occupied with some other object than their own health; business, when it is not of a kind that deeply interests or agitates the mind, by involving the risk of large sums, may be continued; but the bold adventures and gambling speculations in which the modern merchants so much indulge, are of a pernicious tendency. The expedient of change of scene, by going on a journey, is as good as can be devised; taking care to avoid damp, fatigue, and all unnecessary anxiety. The bowels of hypochondriacal patients must be very carefully attended to. Aloes, or aloes with colocynth or scammony, should be taken every night, and occasionally a smart purgative of salts or compound powder of jalap should be interposed in the morning. Notwithstanding the complaints which such patients make of weakness, it is dangerous to give them bark, iron, or the usual tonic medicines; or to direct cold bathing. The warm bath is a more probable means of relief.

HYSSOP, *Hysopus officinalis.* A plant growing wild in Germany, the leaves of which contain an essential oil, which may be obtained by distillation with water or spirit of wine. Its preparations were thought to be of use in asthmas, coughs, and disorders of the breast; but in regular practice they are but little trusted to.

HYSTERIA, Hysterics, *or the* Fits. A disease presenting many alarming appearances, though the danger to life is by no means in proportion to the violence of the symptoms. It is chiefly confined to the female sex; and of them it principally attacks the high fed, the luxurious, and the idle; also those who are addicted to the use of malt liquor or distilled spirits. It chiefly occurs between the age of fifteen and forty; though in those who are peculiarly disposed to it, it may continue beyond the latter period. Hysteria is more frequent at the monthly period than at other seasons. In those who are subject to hysteria, it is very readily brought on by emotions of the mind, and especially by any surprise; and by long continuance of the disease, persons are brought to so morbid a state of sensibility, that the slightest noise or external impression agitates and alarms them.

Hysteria attacks in paroxysms or fits. A sensation is felt as of a ball moving about with a murmuring noise in different parts of the belly, from which it seems to rise into the throat, threatening the suffocation of the patient. While this is going on, the patient is affected with stupor and insensibility; and various convulsive movements take place in the body. The trunk is twisted, and the limbs are agitated; and a very common motion is for the patient to beat the breast with the hand, with great violence and frequency, as if in severe mental distress. There are indications of a great fickleness of mind; laughing wildly, and crying, succeed each other, with great frequency and without any apparent cause; and false imaginations, and a degree of delirium sometimes occur. In a longer or shorter period, the patient gradually returns to her senses, with much sighing and sobbing, with a murmuring noise in the belly; but she has commonly no recollection of what takes place in the fit. In different individuals, these paroxysms vary somewhat in their degree of violence, in the number of the symptoms, and in their duration. Sometimes vomiting occurs, sometimes great difficulty of breathing, sometimes palpitation of the heart; sometimes there is a very copious flow of clear urine; or a discharge of flatus. It appears from repeated experience, that this disease, though it attacks with such violence, is considerably under the command of the patient herself, differing in this respect from epilepsy, which assails its unhappy victims with rapid and irresistible force. But while women make a merit of taking fits, while they think it renders them more interesting, while they take no pains to

fortify their minds against the countless sources of irritation which occur in common life; while they expect every inconvenience and uneasiness to give way before them, and allow their tempers to be fretted with every trifle, they certainly have themselves to blame for the hysterical passion; and till their minds are better regulated, they will continue to be subject to it. When serious business, or domestic and personal affliction withdraws the mind of such patients from their accustomed ailments, the hysteric paroxysms are much less frequent. Hence the impropriety of bringing up children in ease and indolence, and with too constant attention to the gratification of their feelings and caprice; and the happiness of those who are early taught to find rational occupation for themselves, and to keep an even temper amidst the ruffling accidents of life.

Causes. "Among the causes of hysteria may be mentioned, excessive evacuations, particularly of the monthly discharge, late hours, depressing passions, continued anxiety, hope delayed, violent excitement, fulness of blood, excess of drinking, &c. Frequently, the causes of a fit are surprise, apprehension, sudden grief, anger, indigestion; but the paroxysms occasionally recur without any obvious cause, particularly when occasioned by plethora, which, in a constitution where the balance of the circulation is nicely poised, often occasions convulsive paroxysms."

Treatment of HYSTERIA. The symptoms during the fit are so like those of epilepsy, that the same remedies are naturally suggested in this disease. We are to try to shorten the fit by strong impressions on the senses, by dashing cold water on the face, by applying hartshorn, assafetida, burnt feathers, or the like to the nostrils; and by putting some stimulant or fetid substance into the mouth, though it is but rarely that the patient at that time can swallow. Much of our attention in hysterical cases must be directed to the prevention of the return of the fits. For this purpose, we are to endeavour to diminish the fulness of the system so commonly the attendant of hysterical patients; and this, by frequent purgatives, by diminishing the quantity of nourishing food consumed, and by directing constant regular exercise. Those purgatives are best, which tend to improve the digestive powers, and to diminish flatulence; hence the compound pills of rhubarb are of great benefit, two being taken every forenoon; and the pills of aloes with assafetida are so useful in this disorder, that they are popularly known by the name of hysteric pills. They may be taken to the extent of two pills every night, or every second night, for a week or ten days at a time, according to their effect on the bowels. As hysteria is almost peculiar to the female sex, and much connected with the monthly discharge, much of our attention is to be directed to keeping this as regular as possible, both as to time and quantity; and, as we have said frequently, this is best done by attending carefully to the general health, keeping the bowels open, and using a tonic, but not a heating diet, with bark, iron, cold bathing, country air, and regular exercise. Much must be done to lessen that mobility of the system, that readiness to be affected with slight impressions that unbalanced mind that is filled with joy or sorrow, gloom or anger, on every trivial passing occurrence, and that is al most happy at the power of being thrown into a fit when any thing crosses its will. Religious principle, rational employment, the steady pursuit of useful knowledge, and the peaceful practice of domestic duties, will be found most powerful antidotes to the irritable, starting, querulous excitement which so often usher in the unseemly train of symptoms that constitute the hysterical fits.

I

ICE is sometimes used in medicine, for the purpose of contracting the vessels of the stomach in cases of vomiting of blood; it is applied externally in ruptures to diminish the bulk of the swelling by reducing the temperature; and in cases of delirium and madness, it is added to water, or pounded, and so applied to the head, to lessen the flow of blood to it, and to stop delirium, convulsions, and inflammatory action.

ICHOR. A thin acrid discharge of a pale bloody-looking fluid from the surface of certain bad ulcers, as the cancerous, and some others. The adjective derived from it, is *ichorous*. The origin of the term is to be found in the heathen mythology, which describes the vital fluid of the gods, as not blood, but something paler and more refined.

ICHTHYOSIS, *Fish Skin*. A disease of the skin, having a thick, hard, rough and scaly texture. At first, the skin is discoloured and muddy-looking; at length the hardness and roughness become greater, and the colour is nearly black. There are innumerable hard prominences, sometimes flat, large, and overlapping each other like the scales of fish; at other times, they are separate, and intersected by whitish furrows. The whole skin is dry, and perspires with difficulty. The disease often commences in childhood, and even in infancy. It is troublesome and unmanageable, and has been known to continue for several years. Dr. Willan recommended to pick the scales off carefully with the nails from any part of the body, while it is immersed in hot water. Dr. Bateman has known the skin cleared by bathing in sulphureous waters, and rubbing it with a flannel or rough cloth, after it had been softened by the bath; but the skin below was bright and shining, and the eruption returned. Pitch pills have been taken with advantage, and to a great extent: Four pills of five grains each have been taken three times a-day, and this quantity has been gradually augmented, till three drachms have been taken in a day.

ICTERUS. *See* JAUNDICE.

IDIOSYNCRASY, a peculiarity of constitution, so that a person is affected by certain agents, differently from the generality of mankind. Thus some persons are incapable of using butter or cheese; some are purged by honey; others cannot wear flannel without intolerable irritation; some have a violent fever and eruption by the use of certain kinds of fish, or certain fruits, or malt liquor. Some people have idiosyncrasies with respect to medicines; thus, opium has so very distressing effects on some patients, that it cannot be used by them as by others. Idiosyncrasies are to be discovered only by experience in each individual case; and where they are matters of indifference, it is needless to waste time in combating them; but where they may lead to disease, or interfere with methods of cure, a prudent physician will endeavour to correct them.

ILIAC PASSION. A severe and painful affection of the bowels, in which the patient is racked with most acute pain, accompanied with costiveness and vomiting, and this not only of the contents of the stomach, but also of bile, and even of matters proceeding from some portion of the intestinal tube yet farther from the stomach. So completely is the downward progressive motion of the bowels inverted, that articles which have been given by way of clyster, have been known to be vomited by the mouth. Costiveness sometimes precedes the disease for

some days, and the pain is felt very much about the navel. These symptoms may occur without fever, but it is unlikely that so violent suffering and such disordered action of the intestines should not both excite much irritation in the nervous system, and also induce inflammation in the bowels; and therefore, if the iliac passion be not very quickly relieved, we may expect soon to find heat, thirst, restlessness, quickened pulse, and pain in some part of the abdomen on pressure. We are informed by examination of the bodies of those who have died of this disease, that a spasmodic action or cramp takes place on some part of the intestines, or that one part of the gut is drawn within the other; and the knowledge of this circumstance leads us at once to be cautious in our prognostics, and to see the necessity of prompt and decided treatment.

Causes. Iliac passion arises from food that disagrees with the stomach and bowels, long continued costiveness, hardened stools, some metallic poisons, and cold applied to the feet or other parts of the surface.

Cure. In cases of iliac passion, it is always advisable to bleed, and that even largely and repeatedly, both to prevent inflammation coming on, and to take off the spasm of the bowels. This removal of spasm is to be further promoted by the application to the belly of flannels wrung out of hot water, or by putting the patient in the warm bath. It would be a most desirable object to give purgative medicines by the mouth, in order to restore the downward action of the intestines, and to discharge any irritating matter; but unhappily the stomach is apt to reject them all, and to frustrate our purpose. In this state, we must have recourse to the seemingly dangerous and unsuitable practice of giving opium, which frequently relieves the pain, stops the vomiting, and permits us to use the proper purgative medicines. For this purpose, the tincture is not so good as solid opium, one or two grains of which will remain on the stomach, when thirty or forty drops of the medicine in a liquid form would be rejected. Patients should endeavour to refrain from drinking any thing till the opium has allayed the irritation. A large blister may be applied to the abdomen; it will probably be an effectual remedy, with the only disadvantage that we have to wait some time for its good effects. If the opium and blister diminish the irritability of the stomach, we are to try the exhibition of calomel, giving four grains every hour; and it is better retained when given dry or with a little brown sugar, than when mixed with jelly or any similar substance. A dose of senna, or castor oil, or sulphate of magnesia, may be given an hour after the third or fourth dose of the calomel. From half an ounce to an ounce of turpentine often proves a most effectual purgative. Clysters should never be omitted; at first the milder kinds should be tried, as a large quantity of warm gruel, with a little oil, or salt, or an infusion of senna, with a portion of sulphate of magnesia. These should be thrown in with considerable force. If these remedies fail, a very effectual, but a very hazardous one must be tried, the injection of an infusion of tobacco, in the proportion of a drachm of the leaves to an English pint of water. This is very generally followed by the most remarkable sickness, relaxation of the system, and depression of strength, and must never be given but under the direction and personal superintendence of an experienced practitioner. It was at one time thought a proper piece of practice to remove the obstruction of the bowels by mechanical means, as by the weight of large quantities of quicksilver; but a moment's reflection must show, that from the numerous convolutions of the intestines, and the numerous changes of their direction, no column of mercury can make the direct pressure requisite to remove the obstructions that may be in various parts of the bowels. Metallic quicksilver generally passes through the bowels, without undergoing any change.

IMPERIAL. A drink made by dissolving, or at least suspending cream of tartar in water, and flavouring it with lemon-peel. It ought never to be used except as a medicine, being apt to retard digestion, when used as common drink.

IMPETIGO. A disease of the skin, applied in the advertisements of quacks to a considerable variety of skin diseases; but in the more accurate language of Willan and Bateman, to certain pustular eruptions, of which the ringworm is one. *See* RINGWORM *and* TETTER.

INCUBUS. *See* NIGHTMARE.

INDIGESTION. *See* STOMACH COMPLAINTS.

INDIAN CHOLERA. *See* CHOLERA MORBUS.

INFANTS, DISEASES OF. The period of infancy may be considered as extending from birth till all the milk or shedding teeth are advanced through the gums. The delicacy and peculiarity of the structure of infants at that period render them susceptible of many disorders, and demand unremitting and skilful care in their management. It has been a long-prevailing and general error, to suppose that physicians are ignorant of the diseases and management of infants, and that it is better to leave them to the care of nurses and old women, whose skill and experience render them far better qualified for the task. Such notions, it is to be hoped, are now almost extinct, even amongst the lowest vulgar. The ill-informed and prejudiced minds of such persons totally unfit them for the discrimination and tenderness required in those who treat the diseases of infants; and these diseases present such marked symptoms, that an attentive medical man is more at home in prescribing for them, than he is with many adults, whose unskilful and sophisticated accounts of their ailments are likely to disturb his views of their case.

Why INFANTS *are peculiarly susceptible of Disease.* At the time of birth, the bones of the infant are soft and spongy; many of those which in the adult are but a single piece, are in the infant composed of several pieces; and the ends of the bones which form the joints are as yet merely gristle. Their flesh is soft and flabby, and there is a great proportion of cellular substance. Their vessels of all kinds are numerous, and act very frequently: thus, the pulse of the infant is almost double the quickness of that of an adult. Their nerves are numerous, and easily receive impressions. The skin is very delicate, easily acted upon by external impressions, and apt to have various morbid affections induced upon it, by disorders of the digestion, or other irregular actions of the internal organs. The head of infants is large in proportion to their body, their bones are thin, and not connected together by indentations or sutures, as anatomists call them, but by membrane; and the soft and vascular brain, therefore, may be easily bruised and injured. The eyes are very delicate, and easily hurt, and the nose is peculiarly susceptible of cold. The lungs also are weak and irritable. The liver, which is large at first, diminishes after birth. These various peculiarities, and the delicacy of their constitutions, especially in the digestive organs, render them liable to various diseases.

To enumerate all the diseases of the infant state, would be to present a long and melancholy catalogue; but parents must console themselves with the thought that every child is not liable to every disease, and that however numerous and formidable their complaints may be, there is often a wonderful power in their frame, enabling them to resist many noxious circumstances under which an adult would sink. The principal diseases to which infants are peculiarly liable are the following: 1. Diseases which appear immediately after birth, or imperfections of structure, hare-lip, rupture of the navel, division of the lower part of the spine called *spina bifida*, deformed feet, tongue-tied, swelling of the breasts, purulent running from the eyes. 2. Their skin diseases are wonderfully numerous, the gum, white and red, chafing or scalding, scabby

eruption on the cheeks and forehead, itch, eruptions resembling itch; mealy tetter, wild-fire, dandriff, porrigo or scabbed head, boils and pustules, purple spots, the rose, sore ears, nettle-rash, spongy gums, thrush, skin-bound, small-pox, measles, cow-pox from inoculation, chicken-pox, scarlet fever; roseola, a disease resembling measles. 3. Teething and its numerous maladies. 4. Various other diseases, water in the head, convulsions or fits, palsy, croup, hooping-cough, vomiting, looseness; or its opposite state, costiveness; colic and griping pains, inflammation of the bowels, rickets, worms, jaundice, fevers of various types, snuffles, fainting, difficulty of making water, &c.

The greater part of these various maladies are treated of under their several names. We shall here mention some particulars respecting the state of the bowels of infants.

Costiveness of INFANTS. The bowels of some infants are slower than others, without this going the length of disease, or requiring any interference. There should not be less than one copious stool in the twenty-four hours. If a longer period than this should pass over without an evacuation, a pretty smart laxative is to be given for three or four successive days, of manna, or magnesia, or castor oil, or jalap, or syrup of senna. If these means fail, there is reason to think that the nurse's milk is in fault; and if we cannot correct it by altering her diet and keeping her bowels open, it will be necessary to change the milk.

Looseness of INFANTS. The number of evacuations daily passed by infants without prejudice to their health, is more than those passed by adults; and when they amount to four or five, it is not to be regarded as prejudicial, unless the health be impaired, or some symptom appear of the child not thriving. When looseness happens in infants, the appearance of the stools is very various. 1. They are light green, and have a sour smell, forming what is called in common language the *green scour*. Such stools are accompanied with fretfulness and griping, but are readily cured by a purge of rhubarb and magnesia, or of syrup of senna and rhubarb. The diet of the child should be arrow-root, and the diet and the bowels of the nurse should also be regulated. 2. Sometimes the stools are *slimy*, either from exposure to cold or irritation of the bowels, and they are also streaked with blood. If there be great pain or fever, we have reason to fear that one part of the gut has been taken within another. The warm bath, fomentations to the belly, and a dose of castor oil are the proper remedies. If the child be teething, it is possible that the increased quantity of acrid saliva swallowed may be the cause of the looseness, and therefore it may be useful to begin with giving an emetic. 3. The stools may be very liquid and of a dark colour, occasioning what are called *watery gripes*. This form of looseness very speedily brings down the infant's strength, and must be carefully attended to. It is an attendant on teething, and arises also from bad milk, or some mismanagement of the child. The cure is to be attempted by an emetic of ipecacuan, followed by a laxative of rhubarb or castor oil; and the irritation of the bowels is to be allayed by giving a clyster of starch with a little laudanum, for three or four successive nights. The state of the teeth is to be attended to, and warm clothing should be worn by the child. 4. Sometimes large quantities of *clay-coloured* stools are passed, not liquid, but rather consistent; by these the strength is greatly reduced in a very short time. Rhubarb and magnesia, with a grain or two of calomel, followed by purgatives of senna, opiate frictions, and attention to the diet, are the means to be tried; but the disease in question is frequently fatal in spite of them all. 5. The stools are sometimes of a *dark-green colour*, and resemble chopped spinnage. Such stools are passed in the course of croup and other acute diseases; they are also occasioned by frequent doses of calomel. Aloes, senna, and other purgatives are the remedies to be employed.

6. At times, the stools consist principally of *the food in an unchanged state.* This must obviously be a very weakening and dangerous affection. If it occurs after other illnesses, it indicates that the powers of life are nearly exhausted; but if it arises from teething, or other temporary irritation, it shows that the parts concerned in digestion require some stimulus. Rhubarb in small doses, either of the powder or tincture, alterative powders of calomel and rhubarb, and a proper change of the diet, are to be had recourse to. The various kinds of looseness may pass into one another, and the particular causes of the complaint may be difficult to distinguish. Whatever be the original form of looseness, when it is continued any length of time, certain symptoms are induced which indicate great danger. Such are a constant fretfulness of temper, with an altered appearance of the countenance, uneasy breathing, dryness of the skin, swelling of the glands in the groin, great looseness of the skin, of the thighs especially, and distension or shrinking of the belly. A voracious appetite or loathing of food are both very dangerous symptoms.

Original Imperfections of INFANTS. Infants are sometimes born with parts deficient, superfluous, or misplaced; sometimes the natural passages are closed, or they have marks on different parts. Many of these imperfections admit of no remedy, others may be easily rectified. Those which occur most frequently are the hare-lip; the fixing down of the tongue so that the child cannot suck; club-feet, ruptures. *See* HARE-LIP, TONGUE-TIED, RUPTURES, &c.

"The natural passages of infants are sometimes shut up, and prevent the usual excretions. This is known by examining the cloths and parts affected. In some cases, slime alone proves the obstacle; but in others, membranous substances close up the passages. In every instance where any thing uncommon is observed, the infant should be carefully examined by a skilful surgeon, that the proper means for affording relief may not be too long delayed. In some rare cases, it unfortunately happens that no assistance can be given. It is, however, generally proper to try the effect of an operation." (PROFESSOR HAMILTON.)

INFANTS, *Management of, immediately after Birth.* 1. *Navel-String.* When the infant is separated from the mother, and the navel-string is tied, the part attached to the child should be almost three fingers breadth; and a little piece of linen rag is to be wrapped round it, to keep it from fretting the skin of the neighbouring parts. In five or six days after birth, this portion of the cord drops off, leaving the part below a little tender, but this goes off in a week or two merely by the application of a singed rag. A split raisin, by its succulence and astringency, makes the process of healing quicker. But sometimes a tedious ulceration takes place, and a small fungous growth springs up, or there may be erysipelatous inflammation; often a few fiery pustules show themselves round the navel. The treatment of these disorders is to be varied according to circumstances, by astringent washes, or by cooling lotions, or dry powders. Sometimes it may be necessary to touch the rising flesh with a little caustic. 2. *Washing.* It is very proper to wash the new-born infant with tepid water, as there may be various impurities about its surface, and frequently a thick layer of white viscid matter covers a great part of its body. This washing should be very gently performed, and we need not be anxious to have every part of the skin quite clean. What does not come off at the first washing, will readily come off at the next. No spirits should be put on any part of the body. For the first two or three weeks, the water used for bathing the child should be a little warmed, and afterwards it should be bathed morning and evening in cold water. The morning washing should be of the whole body; in the evening it will be sufficient to bathe the lower parts. The infant should be always kept quite dry. 3. *Clothing* The good sense of modern times has abo-

lished the absurd and dangerous practices of swathing and binding infants in the tight manner it was formerly done. Their dress should be light and easy, adapted to the climate and season; and in the night, they should not be kept too warm. The dress should be fixed with tapes, and not with pins; and though a considerable extent of motion should be allowed to infants, their hands should not be suffered to scratch their face and eyes; and a flannel roller should be kept round the belly for a protection to the navel, at which there is apt to occur a rupture from their violent crying. 4. *Purging of Infants.* The bowels of new born infants contain a large quantity of a dark, viscid, tenacious matter, which medical men call *meconium.* In general, it comes off either spontaneously, or with the help of a little sugar and water, which is very commonly given to infants soon after birth; but if there be no black stools within six or eight hours after birth, it will be necessary to give a little castor oil, or a solution of manna, or to use a small piece of yellow soap as a suppository. This black matter will come off for a few days; and, in general, the first portion of milk which the child sucks, acts as a purgative, and cleans the bowels of all that remains of the meconium. When it is retained too long, it may be productive of considerable inconvenience; and in the West Indies, is thought sometimes to give occasion to the locked jaw in infants. 5. *Air and Exercise for Infants.* Nothing is of more consequence to infants than good air, but they must not be exposed to the open air too soon; not for three weeks or a month, unless the weather be unusually fine. When infants are first taken out of doors, they should not be kept out long at a time; the person who has charge of them should walk gently, and be careful to avoid standing still, especially in a current of air. Exercise, as we have mentioned under that article, is also essentially necessary. At first, the common operations of washing, and being dressed, morning and evening, are sufficient exercise; then the playfulness of a healthy infant so delightful to its mother, and so readily indulged by her, accomplish the same purpose; as the limbs get stronger, the exercise may be extended still further. All constrained postures and long confinement in any one situation should be avoided; and the infant should not always be carried on the same arm, nor be laid always on the same side. "A healthy infant," says Dr. Parr, "is fond of exercise. He should be moved gently up and down, but without any shocks. On this account, the modern cot is preferable to the cradle, for the child may be shook by the latter into a stupor, which a nurse (or keeper) will take care to do, as it saves her the trouble of attending to the infant's play. In dandling the child, great inconveniences arise from compressing the breast. The child sits on the left hand, and, to prevent accidents, leans forward against the right, placed on its breast. If the nurse is timid, or if the child starts, the only security is to clasp the breast, by which the ribs are often compressed. If, however, the right hand is placed under the arm, with the thumb over the shoulder, an active child may even start from the other hand without danger. The right hand will support it or convey it gently to the ground. Swinging seems to give children an uneasy feeling; and even being carried quickly down stairs, will make them shrink to the nurse's breast. This is almost the only instinctive feeling, that, after much observation of children, has occurred to us. Gentle friction is an excellent addition to exercise, and peculiarly grateful to infants.

"A healthy child scarcely ever cries. This position, we know, will be disputed; and a child is said to be peevish, fretful, and uneasy, when the nurse is careless and inattentive. Dispositions undoubtedly differ; but the parent who finds a child constantly crying, should suspect her nurse, and even herself. One cause of this fretfulness is the opinion that the nurse knows when the child should sleep,

or eat, better than itself. It is forced to feed when not hungry, and to sleep when eager for play or amusement. We have often cured this disease, by correcting the attendant. It indeed happens, that some children will not sleep by night, but even this may be conquered by management; for the healthy child may be amused during the day, and his amusements may be gradually protracted till night approaches. Disposition and fancies show themselves very early to the attentive observer; and when reason has not yet attained its power, to correct them with violence, irritates without amending. Even at an early age, children may be soothed into regularity and obedience; they cannot be forced. If a child screams suddenly, he is undoubtedly ill, and should be carefully attended to." (PARR'S *Medical Dictionary.*)

INFECTION. *See* CONTAGION *and* FEVER, *page* 262.

INFLAMMATION. A part of the body is said to be *inflamed*, when it is affected with heat, swelling, redness, and pain. We judge the same symptoms to be present in parts not subject to our inspection, when, along with pain in an internal part, and an incapacity to perform with ease its functions, there is a degree of fever occurring throughout the system. An inflammation may be so slight and limited as to produce no derangement in the system at large; but if the inflammation be extensive, or if it attack certain parts, the most violent general fever is excited. In such a case, there is great heat and dryness of skin, thirst, strength and fulness of pulse, and other feverish symptoms. When blood is drawn from the body while in a state of inflammation, after the blood coagulates, it appears covered with a tough leathery looking surface, known by the name of the inflammatory crust or buffy coat. This is to be understood with some latitude, as even in strong inflammation, certain circumstances may prevent the buffy coat from showing itself; and in pregnancy, when no disease is present, the buffy coat appears on blood drawn from the veins.

INFLAMMATION, *Nature of.* What it is in the body that constitutes inflammation, has been always a copious source of medical controversy. It is yet the grand problem to be resolved in pathology, and the ready topic for the young and aspiring disputant to show his powers at theoretical discussion. Some have thought it is owing to a thickened state of the fluids in the extreme vessels; some to a constriction on the extremities of those vessels; some think there is an overaction in the part inflamed; some that the reverse, viz. diminished action, takes place. But instead of occupying time by stating unconfirmed opinions, it will be more profitable to state the exciting causes of inflammation, that we may be led to avoid them, or to gather from them indications of cure.

Causes. 1. The application of heat by burning or scalding; of chemical acrids, as the strong acids and alkalies; and of certain vegetable substances, as nettles. 2. Substances lodged in any part of the body, either irritating by their acrimony, or hurting by their being sharp or rough, or by their bulk; hence thorns, splinters, bullets, excite inflammation. 3. Wounds, bruises, lacerations, strains, affect a part with inflammation. 4. Cold applied is a very frequent cause of it. 5. An unusual violence of the blood directed to any particular part, has a tendency to inflame that part. 6. Inflammations of greater or less extent arise in the body, without our being able to assign any external cause.

INFLAMMATION, *Terminations and Consequences of.* When a part that has been inflamed returns, either spontaneously or in consequence of remedies, to its healthy and natural state, the inflammation is said, in surgical language, to end in resolution. This is the most desirable way of its ending, and is to be promoted by the various means to be afterwards mentioned. Very frequently, instead of resolving, inflammation proceeds till a new action is induced

in the inflamed part; and a peculiar fluid is formed, whitish, opaque, and in some degree viscid, known by the name of *pus* or *matter*. If we cannot obtain resolution of the inflammation, this is the next best termination of it. Pus may either be thrown out by inflamed surfaces, or it may collect in cysts or bags, which when small are termed pustules, or when of a larger size, abscesses. When the inflammation is of extreme violence, it sometimes terminates in the mortification or complete destruction of the parts; and this may either be a death of a part only, or it may be the forerunner of dissolution. Sometimes a consequence of inflammation is a thickening of the parts, a hardness, a loss of transparency, as in diseases of the eye; or, parts naturally separate may grow together, as happens very frequently indeed when there is inflammation in the chest; the membrane covering the outside of the lungs forming adhesions with that lining the inside of the ribs. In the inflammation and suppuration arising from burns, wounds, &c. care must be taken to keep asunder parts which are included in the accident, but which ought to be separate; thus if the fingers be tied up without something being interposed, they will grow together; and a stiff elbow-joint has been known to be induced by unskilful dressing after a burn. In glandular parts of the body, as the liver, the breasts, and some of the smaller glands, inflammation induces a hardened unhealthy state, termed *schirrus;* which renders it liable to an impervious state or cancerous action, which may ultimately prove fatal, though, for a time, the functions may imperfectly go on.

Inflammation, *Treatment of, in general.* We are to endeavour, in almost every case, to accomplish the resolution of inflammation; and for this purpose, to check the overaction of the system, or of any particular part. This is to be done by withdrawing blood, either from the whole system, by opening a vein or an artery; or from any particular part by leeches, or by cupping: active purgatives, particularly the neutral salts, are to be given, and the depressing powers of antimony, in its various shapes, are to be employed. Lotions are to be applied in some cases, either to the part, or as near it as possible; these are generally cold, made by dissolving sal-ammoniac in water, or mixing vinegar and water together; but in some inflammations, as in those of the eye, it is found better to apply the lotion warm or tepid at first. When these means fail, we are to try to promote the formation of matter; and this is to be done by increasing the heat of the part by something soft and warm, as poultices of bread and milk, linseed meal or oat-meal, beat turnips, or boiled onions or figs, or any thing of that nature which will retain the heat long. A great matter to be attended to in poultices, is to make them large, and of such matters as will keep the heat for a considerable time. When an abscess is formed, and the matter points, or seems ready to break the skin, it should be discharged by an opening made by a lancet or sharp instrument. This is in general advisable; but cases may occur in which it might be imprudent to risk the mark that may be left by a cutting instrument, though it is just as frequent for a mark to be left, and even a worse one, when such abscesses are allowed to break of themselves. When the matter is discharged from an abscess, the inflammation does not immediately subside, but remains for some time; and the poultice must be continued for some days longer. Among the several varieties which inflammation exhibits, two are remarkably distinguished from each other: that which occurs in a common boil, and that which characterises the rose. The first, denominated by medical writers the *phlegmonous* inflammation, is generally circumscribed, and though very painful for the time, forms an abscess and passes off without any danger; the second, the *erysipelatous*, often spreads to a great extent, and is liable to run into gangrene, and be attended with the greatest hazard. The inflam-

mation of particular organs is attended with its respective train of symptoms, different in each organ; these are detailed under various heads. *See* EYE, BRAIN, BOWELS, LUNGS, &c. *Inflammation of.*

INFLUENZA. A name borrowed from the Italians, and applied to the catarrh or cold, which arises from a specific contagion or aerial influence. There is no epidemic that spreads more generally and more widely. It has seldom appeared, says Cullen, in any one country of Europe without appearing successively in every other part of it, and in some instances it has been transferred even to America, and has been spread over that continent, so far as we have had opportunities of being informed. The two latest epidemics of this description occurred in 1782 and 1803; and about twenty others are recorded, beginning at 1323. Influenzas have occurred in all states of the atmosphere, with respect to its weight, its moisture, or its temperature; and the previous state of the air, with respect to heat or cold, damp or dryness, seemed to have little power in the production of the disease.

Symptoms. The symptoms of influenza are in general more severe than those of the common catarrh. "The attack is remarkably sudden, and at first attended with considerable debility. A few minutes have often interposed between the feelings of high health and extreme weakness. The head, especially the forehead over the eyes, is particularly loaded; all exertion is painful, a tickling of the nose, with frequent and violent sneezing, often suddenly comes on. A load, rather than pain, in the chest, is very troublesome, cough is severe and dry, the tongue parched, thirst often intense. A sore throat is not a common symptom, yet a bright efflorescence is sometimes observed on it. Pulse is low and frequent, seldom hard, the skin constantly dry. In the progress of the complaint, the breast is sometimes more affected, and pleuritic pains are observed in the young and robust. As the skin becomes softer, the tickling acrid mucus from the nose becomes thicker, the head more free; but a considerable debility remains, often for several months." Though the fever at first is high, on its subsidence, alarming debility and typhoid symptoms frequently come on, and in many cases the patient is suddenly and unexpectedly carried off. In more favourable circumstances, the inflammatory stage quickly passes off, but the cough and other symptoms long continue troublesome, and on any exposure to cold are very ready to return. In an epidemic so widely spreading, it is to be expected that it will occur in many young persons disposed to pulmonary consumption, and by its effects on the tubercles in the lungs give rise to suppuration in them.

The middle-aged, the strong and robust, are in general soonest affected, and suffer most severely. Children at the breast generally escape, nor do any seem to suffer within the first year. All beyond early infancy are indiscriminately attacked. The influenza is very often fatal to elderly people.

Treatment. Though the pain of the side and difficulty of breathing are very urgent, and may seem to call loudly for bleeding, yet there is much doubt about the propriety of this measure in the influenza. In the inflammatory stage, in young and vigorous subjects, it may be necessary for once; but this stage is soon over, and that of debility commences; and we must take care not to bleed at too late a period, lest we induce a degree of debility from which the patient will not recover. The pains in the side are better relieved by a blister; and the bowels are to be kept easy, but the system is not to be weakened by strong purgatives. Emetics are often of great service in promoting expectoration and relieving the symptoms, but we must be on our guard that the vomiting go not too far, and induce dangerous weakness. Ipecacuan is one of the best and safest emetics we can employ. It may be given in smaller doses so as to act as an expectorant; and with

the same intention, gum ammoniacum, and squill may be given. The squill pill of the Edinburgh Pharmacopœia is as convenient a form as any other. Emulsions are also of advantage. A most important part of the treatment is keeping the body clothed with flannel, and avoiding all exposure to cold and damp air; and gentle perspiration is to be kept up by Dover's powder, camphor, and warm liquids. Particular care is to be directed to keeping up the strength. Wine in moderate quantity at first, and afterwards more freely, is to be allowed; and the diet is to be nourishing and easily digestible. The debility that remains after the disease, is to be obviated by proper diet, good air, exercise, particularly riding on horseback, and the cold bath.

INFUSION. The extraction of the virtues of vegetable or animal matters, by allowing them to stand for a certain period in water, either hot or cold, without the assistance of boiling. The water thus impregnated with these virtues is called an *infusion*. The principal infusions used in medicine are those of senna, as a purgative, of rose leaves as a gargle, of catechu as an astringent, of rhubarb as a stomachic, of bark as a tonic. "In making infusions, whether in cold or hot water, the ingredients are only steeped in it without boiling. It is the same whether proof spirit, rectified spirit, or any other menstruum is employed, though these preparations have a different title, that of tinctures. This form is preferred where the medicinal portion is soluble and easily separated, when it is volatile and would fly off by boiling, or where it would be lost or destroyed by long maceration. For nervous disorders, infusions are best made in a vinous, a spirituous, or an alkaline menstruum. Stomachic infusions should be moderately spirituous. Cathartic ones, whether saline or resinous, if for extemporaneous use, are best made with cold water. Infusions should not, if possible, be so fully impregnated with the ingredients as to make the medicines unpalatable, though the infusion of many of the fetid plants must be necessarily unpleasing. Many infusions are most agreeable when made with cold water, though probably weaker than when heat is employed." In some cases the water must be fully up to the boiling point, as we see by the weakness of tea which is made by water not quite boiling.

INHALATION. When the dry fumes or watery vapours of certain substances are taken in by the breath with a view to some medicinal effect, they are said to be *inhaled*. To produce a very speedy salivation, patients have been made to inhale the vapour of mercurial preparations. Some bodies, by the very minute state to which their particles are divided by heat, are thus applied to organs which they could not otherwise reach, the lungs particularly. On this principle, the vapour of tar is recommended to be inhaled in consumption and other pulmonary complaints. When any tendency to inflammatory symptoms, or to spitting of blood exists, inhaling the vapour of tar cannot be very safe; and it is chiefly in chronic cases that it is admissible. The smoking of stramonium may be considered as an instance of inhalation. Many have boasted its efficacy in relieving asthma, but its virtues have been greatly over-rated. In catarrhal affections, in sore throat and croup, inhaling the steams of vinegar and water is very beneficial; and in inflammation of the chest, the same practice will promote the expectoration, after the proper bleedings and other evacuations have been employed. For the application of such vapours, Dr. Mudge has invented an inhaler; but the spout of a teapot, or a common basin with an inverted funnel, will answer the purpose well enough.

INJECTION. This word in popular use is generally considered as synonymous with clyster; but it would be better to limit the use of the term *injection*, to signify those liquids which are thrown into the urethra and vagina, for the purpose of lessening the discharges from those

passages. The most common injections for this purpose are made of sulphate of zinc, or acetate of lead, or nitrate of lead, or nitrate of silver, dissolved in more or less of water, according to the intentions of the surgeon. Injections into the urethra are attended with a considerable degree of hazard, and should never be employed by the young and ignorant at their own hand. Astringent decoctions, as those of oak-bark, chamomile, and some others, are used for injections in the whites; and as the astringent matter has the power of coagulating animal mucus, this combination comes away in the form of whitish or ash-coloured flakes; the patient is under great apprehension that she is discharging some of the internal parts of the body; and it has therefore been very properly recommended to prepare her mind for such an occurrence, by previous explanation. Sometimes the harshness of astringent injections is usefully corrected by mixing them in some demulcent fluid, as the infusion of linseed.

INOCULATION. The introduction of a small quantity of morbid matter into the body at a wounded or abraded part. This matter being carried into the system by the absorbents, occasions specific diseases according to its kind. Of this we have examples in the insertion of the saliva of the mad dog producing hydrophobia; of the venereal poison producing syphilis, and of the morbid matter which is so dangerous to anatomists in dissecting some dead bodies. In common language, *inoculation* is generally applied to the insertion of matter into the body with the view of inducing certain diseases, either for the purpose of rendering these diseases, from which few of the human race are exempt, more safe and manageable, or of occasioning a disease of a mild nature, which has the effect of incapacitating the body from receiving another of a dangerous tendency. The inoculation for the small-pox and for the cow-pox are the instances most familiar.

The inoculation for the small-pox was first practised among the natives of Circassia and Georgia; and was introduced into this country about the year 1721, by Lady Mary Wortley Montague. It was observed that fewer died of the small-pox, who had been inoculated, than of those who took them in the natural way; and the reason of this seems to be, that inoculation was performed on children in the most favourable circumstances, when they were free from any other disease either of an inflammatory or debilitating tendency, when they were prepared by cooling medicines, and because it was done at a favourable season of the year. It is to be remarked, however, that although all this might be in favour of the individual inoculated, it was highly dangerous to his neighbours, as it put them in the way of receiving the infection of small-pox in the natural way; and from a disease of the mildest and most favourable kind, those living near the patient might be seized with a most malignant and fatal malady. It is, therefore, no wonder, that the discovery of the power of cow-pox to unfit the constitution for receiving the infection of the small-pox, was received by the greater part of the world with the highest satisfaction, as it inflicts on the individual patient a disease not only so slight as to be absolutely insignificant, but one which has no danger of communicating to others even this slight ailment, without some pains being taken to procure its insertion into the body at an abraded part. *See* Small-Pox *and* Cow-Pox.

INOSCULATION or Anastomosis, signifies, in anatomy, the running of the arteries and veins into one another.

INSANITY, Mental Diseases; Mania, *or* Madness. It is difficult to give a definition of mental disorders, that will be satisfactory to the various classes of persons who have to deal with the human mind. The metaphysician, the moralist, and the medical practitioner would probably all differ in the degree of vice, folly, absurdity, or fury, that they would consider as constituting the state of mad-

ness; while the infinitely diversified characters of men, and the changing intellect and views of the same person at different periods, tend still further to perplex the subject, and require a great latitude to be allowed in all our discussions on the derangements of the understanding. In a plain and practical work like this, we shall not attempt the strictness of metaphysical accuracy, but shall state some of the more remarkable symptoms of madness, which are expected to be taken care of by the medical attendant. Medical writers, in treating on this subject, commonly adopt the following distinctions :— I. *Mania*, or *Madness*, as it occurs either in the sanguine or melancholic temperament. II. *Fatuity*, or *Idiotism*. III. *Melancholia*, by which is meant, not what we commonly understand in English by the word *melancholy*; but the condition of the mind of those who, on all subjects but one, reason and act like other men.

I. Mania. Madness is distinguished by the patient having false and incorrect views of things, especially shown by the wrong opinions he entertains of his nearest friends; suspecting them of the most malignant intentions towards him, and treating them with the bitterest abuse and hatred; he talks incoherently and ravingly, and often with prodigious rapidity, and for a long continuous period; the passions are not under the control of the will, and there is, for the most part, great violence of action, and furious impatience of restraint.

Insanity in the melancholic temperament has some variety in the symptoms. Such patients are sad, dejected, and dull, without any apparent cause; gloomy and fond of solitude. They are cowardly, prone to anger, and changeable in their tempers; when the disease is at its height they are very furious, and some tear and mangle their own bodies. Their countenance is pale, and their pulse is slow; their bowels are generally costive. As the paroxysm goes off, they are stupid, calm, and mournful; and much grieved on account of their unhappy situation. Patients of this description are often lamentably prone to suicide.

A striking circumstance in maniacal patients is their power of resisting impressions from external things, which persons in health feel so acutely. A maniac will endure, for instance, an intensity of cold, which would destroy a person in health; the ordinary doses of medicine have little or no effect upon them, and they are capable of enduring hunger for a very long time. The muscular strength of maniacal persons is prodigiously increased; and it is a difficult matter to restrain them by the strength of other men in the violence of their paroxysms.

Persons of every different temperament are subject to madness, but it principally attacks the exquisitely sanguine, or the exquisitely melancholic. In many cases of mania, it is not a permanent affection, but there are what are called lucid intervals, during which the patient is in good health of mind and body. Mania comes on at different periods of life. It is not at all certain that the moon, in any part of its course, has any influence on madness. Sometimes mania lasts during the whole of the life of the patient, or degenerates into idiotism. The immediate accession of a paroxysm of madness does not show itself by the same symptoms in different patients. Not unfrequently they complain of uneasiness about the stomach, costiveness, heat, and want of sleep. Soon after, the language and conduct become incoherent, and the motions and gestures wild and irregular; some are gloomy and sullen, while others are good-humoured and disposed to laughter. In some cases the conduct is violent and furious; there is grinding of the teeth, rolling of the eyes, loud roarings, great exertion of muscular strength, a desire of hurting those around them, and especially those who were formerly most dear to them.

Causes of Insanity. Though the examination of the bodies of maniacs has as yet thrown no light on the causes of

madness, nor enabled us to say what part of the brain or nervous system is principally interested, yet we cannot doubt, but in our present state of being, there is the most intimate connexion between mind and body, and that the disordered intellect is connected with some remarkable changes in the bodily functions.

It is very often a hereditary disease, and there can surely be none of a more afflicting nature. It is brought on by sudden and violent emotions of the mind; jealousy, anger, love, pride, joy, disappointment; though it is remarkable, that an unexpected flow of prosperity, or a sudden communication of joyful intelligence, is more frequently known to upset the mind than the reception of disastrous news. Madness is often the sequel of frequent intoxication, of violent exercise, of the sudden drying up of accustomed drains or evacuation from the body. The injudicious use of mercury, and the occurrence of some febrile diseases, has been known to excite madness; and some circumstances in parturition, though we cannot say in what constitutions these circumstances occur, seem to give rise to madness; but sometimes this last species, though it lasts very long, is at last got the better of.

Treatment. In the early and furious stage of madness, something is to be attempted by medical means, to allay the violent excitement. The head is to be shaved, and cold applied, either by pouring on cold water and vinegar, by laying on wet cloths, or, as has been sometimes done, a clay cap. Blood may be drawn, and purgative medicines of great activity given, as gamboge, jalap, and scammony. The remarkable resistance of the system to the powers of medicine renders it necessary to increase the doses given, and to persist in them for some time. To prevent the maniac from injuring himself or others, the best expedient is the strait waistcoat; and it is always distressing and hurtful to make the patient contend with the strength of other men. However painful to the feelings of friends it may be to have recourse to the strait waistcoat, it is in reality the most lenient method we can employ; it gives no pain to the patient; and very commonly when he finds that his exertions are unavailing, he gives them over, and continues quiet.

The first period of the attack, when the body is much disordered, is soon over; and then comes the difficult part, the management of the mind. This has too often been left to persons of rude habits and unfeeling hearts, who have thought to govern their unhappy charge by brute force, to restrain their violence by bolts and chains, or to quell their passions by blows and stripes. Of late years, a more humane and rational practice has prevailed. Persons of education, of principle, and of humanity, have undertaken the management of the insane; and though they must necessarily employ meaner hands in the details of their duty, their superintendence has been faithfully exerted to prevent any improper conduct in their subordinate agents. When a person becomes decidedly insane, it is unquestionably the most prudent and humane measure, to put him under the care of persons who have devoted themselves to this occupation; and to remove them from their usual homes, to places where security is combined with as much comfort as their situation will admit of. It is of great consequence to acquire an influence over the minds of maniacs, and this is to be done by the exercise of prudence and firmness; by showing them that their violent and outrageous conduct does not lead them to the attainment of their purposes. Coercion is in very many cases absolutely necessary, and this should be employed in the most peremptory and effectual manner. It should be remembered that the muscular strength of maniacs is great, and therefore the force employed in securing them should be amply sufficient, and such as not only to prevent the patient from being successful in his resistance, but such as to show him instantly that resistance is vain. When the

keeper has established in the mind of the maniac, the awe and respect necessary for his management, the patient is to be treated with all possible lenity and attention, conformable to his station in life, and to his former habits; and every indulgence consistent with his health and security should be allowed. It is of great moment to keep maniacs employed; and many establishments engage their patients in constant and regular field-work or exercise. This may be repugnant to the former habits, and to the rank of some patients, who are therefore deprived of a resource and a means of cure, possessed by their more humble fellow-sufferers. Females are to be allowed their usual occupations, drawing, music, sewing, knitting, or the like. There is frequently a degree of cunning about maniacs which is very apt to deceive the ignorant and inexperienced. They appear to conduct themselves with great propriety when in confinement, but whenever they return to their families, their disorder returns. Their relations should therefore be very cautious about removing them.

The diet of insane persons should be light, nourishing, and easy of digestion, and in proper proportion to their bodily strength, and the exercise they are accustomed to take. Even of wine, a moderate quantity is not to be prohibited to those who have been accustomed to it, so long as it does not heat the patient, or aggravate his disease. With respect to medicine and all its auxiliaries, drugs, warm and cold bathing, and other appliances, insanity seems to be quite beyond their reach; and the utmost we should attempt in this way should be to obviate costiveness, and occasionally to administer the warm bath. Some have thought a blister or issue to the back or neck may be useful, but the dressing of such sores would be so difficult that such expedients are better let alone. In the melancholy or depressed kind of madness, a little variation of the treatment is to be adopted. Instead of withdrawing stimuli altogether, we are to admit light and free air, to suffer the patient to look out on green fields and cheerful objects, and to permit every healthful and safe amusement of which they are capable. Every instrument of destruction must be carefully kept out of their way. Insane patients, when confined in cold weather, are subject to a mortification of the toes and feet, and when helpless and bed-ridden, are liable to ulcerations of different parts of the body. To prevent these melancholy accidents, the apartments of asylums should be warmed by heated air; and the parts likely to become affected are to be rubbed with emollient or stimulating liniments, and soft substances should be put under them to lessen the effects of pressure.

II. Fatuity *or* Idiotism is a very hopeless kind of mental disease. It often arises from original imperfection of the faculties of memory and judgment, and sometimes forms one of the sad train of evils that beset the path of closing life. It sometimes arises from epilepsy or organic diseases within the skull; or it is the consequence of disorders in which the mind and body have been long debilitated. In the last cases only, is there the smallest encouragement to attempt a cure; and this is to be tried by cheerful company, gentle exercise in the open air, change of scene, a generous diet, and attention to the bowels.

III. Melancholia is the technical term adopted by Cullen and other writers, for that species of insanity in which, on all subjects but one, the patient thinks and acts correctly. No better example can be given of this disorder, than one with which all Europe is familiar, the case of the Hero of La Mancha, the Champion and Flower of Chivalry. On all subjects but one, Don Quixote displays good sense and virtue of the highest order; but when knight-errantry and romance come across his disordered imagination, he is betrayed into the most absurd reasoning, wild adventures, and ludicrous distresses. The treatment of patients affected with this partial insanity, scarcely belongs to the physician, unless

when there is considerable derangement of the health, or when he is consulted as to the propriety of putting them under restraint. He can only recommend attention to what is likely to promote the general health, especially the diet, and the regularity of the alvine discharge; and it is right to comply with the more harmless fancies of the patient, and mildly and unobtrusively to combat those which are more dangerous. Precautions should of course be taken, that those who labour under partial insanity neither injure their own persons, nor those of others. Much of the treatment is applicable here, which we have detailed under HYPOCHONDRIASIS.

In a late work, on the *Intellectual Powers*, by Dr. ABERCROMBIE, he has some observations on the subject of Insanity, which he discusses like a Christian moralist as well as a physician; and we are happy to add to the foregoing very imperfect sketch of the different kinds of insanity, and their treatment, a large quotation from his useful and judicious pages.

The principal distinction he makes of mental diseases, is into insanity in its various kinds and degrees, and idiotism. "There is a peculiar power which is possessed by the mind in a healthy state, of arresting or changing the train of its thoughts at pleasure,—of fixing the attention upon one or transferring it to another,—of changing the train into something which is analogous to it, or of dismissing it altogether. This power is, to a greater or less degree, lost in insanity, and the result is one of two conditions. Either the mind is entirely under the influence of a single impression, without the power of varying or dismissing it, and comparing it with other impressions; or it is left at the mercy of a chain of impressions which have been set in motion, and which succeed one another according to some principle of connexion, over which the individual has no control. In both cases, the mental impression is believed to have a real and present existence in the external world; and this false belief is not corrected by the actual state of things as they present themselves to the senses, or by any facts or considerations which can be communicated by other sentient beings. Of the cause of this remarkable deviation from the healthy state of the mental functions, we know nothing. We may trace its connexion with concomitant circumstances in the bodily functions, and we may investigate certain effects which result from it; but the nature of the change, and the manner in which it is produced, are among those points in the arrangements of the Almighty Creator which entirely elude our researches.

"It appears, then, that there is a remarkable analogy between the mental phenomena in insanity and in dreaming; and that the leading peculiarities of both these conditions, are referable to two heads.

"1. The impressions which arise in the mind are believed to be real and present existences, and this belief is not corrected by comparing the conception with the actual state of things in the external world.

"2. The chain of ideas or images which arise, follow one another according to certain associations, over which the individual has no control: he cannot, as in a healthy state, vary the series or stop it at his will.

"In the numerous forms of insanity, we shall see these characters exhibited in various degrees; but we shall be able to trace their influence in one degree or another through all the modifications; and, in the higher states, or what we call perfect mania, we see them exemplified in the same complete manner as in dreaming. The maniac fancies himself a king, possessed of boundless power, and surrounded by every form of earthly splendour; and, with all his bodily senses in their perfect exercise, this hallucination is in no degree corrected by the sight of his bed of straw and all the horrors of his cell.

"From this state of perfect mania, the malady is traced through numerous gra-

dations, to forms which exhibit slight deviations from the state of a sound mind. But they all show, in one degree or another, the same leading characters, namely, that some impression has taken possession of the mind, and influences the conduct in a manner in which it would not affect a sound understanding; and that this is not corrected by facts and considerations which are calculated immediately to remove the erroneous impression. The lower degrees of this condition we call eccentricity; and, in common language, we often talk of a man being crazed upon a particular subject. This consists in giving to an impression or a fancy, undue and extravagant importance, without taking into account other facts and considerations which ought to be viewed in connexion with it. The man of this character acts with promptitude upon a single idea, and seems to perceive nothing that interferes with it; he forms plans, and sees only important advantages which would arise from the accomplishment of them, without perceiving difficulties or objections. The impression itself may be correct, but an importance is attached to it disproportioned to its true tendency; or consequences are deduced from, and actions founded upon it, which would not be warranted in the estimate of a sound understanding. It is often difficult to draw the line between certain degrees of this condition and insanity; and in fact they very often pass into each other. This will be illustrated by the following example.

"A clergyman in Scotland, after showing various extravagances of conduct, was brought before a jury to be cognosced; that is, by a form of Scotch law, to be declared incapable of managing his own affairs, and placed under the care of trustees. Among the acts of extravagance alleged against him was, that he had burnt his library. When he was asked by the jury what account he could give of this part of his conduct, he replied in the following terms: 'In the early part of my life, I had imbibed a liking for a most unprofitable study, namely, controversial divinity. On reviewing my library, I found a great part of it to consist of books of this description, and I was so anxious that my family should not be led to follow the same pursuit, that I determined to burn the whole.' He gave answers equally plausible to questions which were put to him, respecting other parts of his conduct; and the result was, that the jury found no sufficient ground for cognoscing him; but, in the course of a fortnight from that time, he was in a state of decided mania.

"It is, therefore, incorrect to say of insanity, as has been said, that the maniac reasons correctly upon unsound data. His data may be unsound, that is, they may consist of a mental image which is purely visionary, as in the state of perfect mania lately referred to; but this is by no means necessary to constitute the disease; for his premises may be sound, though he distorts them in the results which he deduces from them. This was remarkably the case in the clergyman now mentioned. His premises were sound and consistent, namely, his opinion of the unprofitable nature of the study of controversial divinity, and his anxiety that his family should not prosecute it. His insanity consisted in the rapid and partial view which he took of the means for accomplishing his purpose,—burning his whole library. Had he sold his library, or that part of it which consisted of controversial divinity, the measure would have been in correct relation to the object which he had in view; and if we suppose that, in going over his library, he had met with some books of an immoral tendency,—to have burnt these, to prevent them from falling into the hands of any individual, would have been the act both of a wise and a virtuous man. But to burn his whole library, to prevent his family from studying controversial divinity, was the suggestion of insanity; distorting entirely the true relation of things, and carrying an impression, in it-

self correct, into consequences which it in no degree warranted.

" A remarkable peculiarity, in many cases of insanity, is a great activity of mind, and rapidity of conception,—a tendency to seize rapidly upon incidental or partial relations of things,—and often a fertility of imagination, which changes the character of the mind, sometimes without remarkably distorting it. The memory, in such cases, is entire, and even appears more ready than in health; and old associations are called up with a rapidity quite unknown to the individual in his sound state of mind.

" It is this activity of thought, and readiness of association, that gives to maniacs of a particular class an appearance of great ingenuity and acuteness.

" The peculiar character of insanity, in all its modifications, appears to be, that a certain impression has fixed itself upon the mind, in such a manner as to exclude all others; or to exclude them from that influence which they ought to have on the mind in its estimate of the relation of things. This impression may be entirely visionary and unfounded; or it may be in itself true, but distorted in the applications which the unsound mind makes of it, and the consequences which are deduced from it. Thus, a man of wealth fancies himself a beggar, and in danger of dying of hunger. Another takes up the same impression, who has, in fact, sustained some considerable loss. In the one, the impression is entirely visionary, like that which might occur in a dream. In the other, it is a real and true impression, carried to consequences which it does not warrant.

" There is great variety in the degree to which the mind is influenced by the erroneous impression. In some cases, it is such as entirely excludes all others, even those immediately arising from the evidence of the senses, as in the state of perfect mania formerly referred to. In many others, though in a less degree than this, it is such as to change the whole character. The particular manner in which this more immediately appears, will depend of course upon the nature of the erroneous impression. A person, formerly most correct in his conduct and habits, may become obscene and blasphemous; accustomed occupations become odious to him; the nearest and most beloved friends become objects of his aversion and abhorrence.

" The uniformity of the impressions of maniacs is indeed so remarkable, that it has been proposed by Pinel, as a test for distinguishing real from feigned insanity. He has seen melancholics confined in the Bicêtre, for twelve, fifteen, twenty, and even thirty years; and, through the whole of that period, their hallucination has been limited to one subject. Others, after a course of years, have changed from one hallucination to another.

" The sudden revival of old impressions, after having been long entirely suspended by mental hallucinations, presents some of the most singular phenomena connected with this subject. Dr. Prichard mentions an interesting case of this kind from the American journal of science. A man had been employed for a day with a beetle and wedges in splitting pieces of wood for erecting a fence. At night, before going home, he put the beetle and wedges into the hollow of an old tree, and directed his sons, who had been at work in an adjoining field, to accompany him next morning to assist in making the fence. In the night he became maniacal, and continued in a state of insanity for several years, during which time his mind was not occupied with any of the subjects with which he had been conversant when in health. After several years his reason returned suddenly, and the first question he asked was, whether his sons had brought home the beetle and wedges. They, being afraid of entering upon any explanation, only said, that they could not find them; on which he rose from his bed, went to the field where he had been at work so many years before, and found,

where he had left them, the wedges, and the iron rings of the beetle, the wooden part being entirely mouldered away.—A lady, mentioned in the same journal, had been intensely engaged for some time in a piece of needle-work. Before she had completed it, she became insane, and continued in that state for seven years, after which her reason returned suddenly. One of the first questions she asked related to her needle-work, though she had never alluded to it, so far as was recollected, during her illness. I have formerly alluded to the remarkable case of a lady, who was liable to periodical paroxysms of delirium, which often attacked her so suddenly, that, in conversation, she would stop in the middle of a story, or even of a sentence, and branch off into the subject of her hallucination. On the return of her reason, she would resume the conversation in which she was engaged at the time of the attack, beginning exactly where she had left off, though she had never alluded to it during the delirium; and, on the next attack of delirium, she would resume the subject of hallucination, with which she had been occupied at the conclusion of the former paroxysm.

"Among the most singular phenomena connected with insanity, we must reckon those cases in which the hallucination is confined to a single point, while, on every other subject, the patient speaks and acts like a rational man; and he often shows the most astonishing power of avoiding the subject of his disordered impression, when circumstances make it advisable for him to do so.

"Lord Erskine gives a very remarkable history of a man, who indicted Dr. Munro for confining him without cause in a mad-house. He underwent the most rigid examination by the counsel of the defendant, without discovering any appearance of insanity, until a gentleman came into court, who desired a question to be put to him respecting a princess with whom he had corresponded in cherry-juice. He immediately talked about the princess in the most insane manner, and the cause was at an end. But this having taken place in Westminster, he commenced another action in the city of London, and, on this occasion, no effort could induce him to expose his insanity; so that the cause was dismissed only by bringing against him the evidence taken at Westminster. Several years ago, a gentleman in Edinburgh, who was brought before a jury to be cognosced, defeated every attempt of the opposite counsel to discover any trace of insanity, until a gentleman came into court, who ought to have been present at the beginning of the case, but had been accidentally detained. He immediately addressed the patient by asking him what were his latest accounts from the planet Saturn, and speedily elicited ample proofs of insanity.

"Of the nature and cause of that remarkable condition of the mental faculties which gives rise to the phenomena of insanity, we know nothing. We can only observe the facts, and endeavour to trace among them some general principle of connexion; and even in this, there is great difficulty, chiefly from the want of observations particularly directed to this object.

"When the mental impression is of a depressing character, that modification of the disease is produced which is called melancholia. It seems to differ from mania merely in the subject of hallucination, and accordingly we find the two modifications pass into each other,—the same patient being, at one time, in a state of melancholic depression, and at another, of maniacal excitement. It is, however, more common for the melancholic to continue in the state of depression, and generally in reference to one subject; and the difference between him and the exalted maniac does not appear to depend upon the occasional cause. For we sometimes find persons who have become deranged, in connexion with overwhelming calami

ties, show no depression, nor even a recollection of their distresses, but the highest state of exalted mania. The difference appears to depend chiefly upon constitutional peculiarities of character.

" The most striking peculiarity of melancholia is the prevailing propensity to suicide; and there are facts connected with this subject, which remarkably illustrate what may be called the philosophy of insanity. When the melancholic hallucination has fully taken possession of the mind, it becomes the sole object of attention,—without the power of varying the impression, or of directing the thoughts to any facts or considerations calculated to remove or palliate it. The evil seems overwhelming and irremediable, admitting neither of palliation, consolation, nor hope. For the process of mind calculated to diminish such an impression, or even to produce the hope of a palliation of the evil, is precisely that exercise of mind which, in this singular condition, is lost or suspended;—namely, a power of changing the subject of thought, of transferring the attention to other facts and considerations, and of comparing the mental impression with these, and with the actual state of external things. Under such a conviction of overwhelming and hopeless misery, the feeling naturally arises of life being a burden, and this is succeeded by a determination to quit it. When such an association has once been formed, it also fixes itself upon the mind, and fails to be corrected by those considerations which ought to remove it. That it is in this manner the impression arises, and not from any process analogous to the determination of a sound mind, appears, among other circumstances, from the singular manner in which it is often dissipated; namely, by the accidental production of some new impression, not calculated, in any degree, to influence the subject of thought, but simply to give a momentary direction of the mind to some other feeling. Thus, a man mentioned by Pinel, had left his house in the night, with the determined resolution of drowning himself, when he was attacked by robbers. He did his best to escape from them, and, having done so, returned home, the resolution of suicide being entirely dissipated. A woman, mentioned, I believe, by Dr. Burrows, had her resolution changed in the same manner, by something falling on her head, after she had gone out for a similar purpose.

" Attempts have been made to refer insanity to disease of bodily organs, but hitherto without success. In some instances, we are able to trace a connexion of this kind; but, in a large proportion, we can trace no bodily disease. On this subject, as well as various other points connected with the phenomena of insanity, extensive and careful observation will be required, before we are entitled to advance to any conclusions. In regard to what have been called the moral causes of insanity, also, I suspect there has been a good deal of fallacy, arising from considering as a moral cause, what was really a part of the disease. Thus, we find so many cases of insanity referred to erroneous views of religion, so many to love, so many to ambition, &c. But, perhaps it may be doubted whether that which was in these cases considered as the cause, was not rather, in many instances, a part of the hallucination. And even when the mind does give way under a great moral cause, such as overwhelming misfortunes, we often find that the hallucination does not refer to them, but to something entirely distinct:—striking examples of this are mentioned by Pinel.

" Insanity is, in a large proportion of cases, to be traced to hereditary predisposition; and this is often so strong, that no prominent moral cause is necessary for the production of the disease, and probably no moral treatment would have any effect in preventing it. We must, however, suppose, that, where a tendency to insanity exists, there may be, in many cases, circumstances in mental habits or mental discipline, calculated either to favour or to counteract the tendency.

"The higher degrees of insanity are in general so distinctly defined in their characters, as to leave no room for doubt in deciding upon the nature of the affection. But it is otherwise in regard to many of the lower modifications; and great discretion is often required, in judging whether the conduct of an individual, in particular instances, is to be considered as indicative of insanity. This arises from the principle, which must never be lost sight of, that, in such cases, we are not to decide simply from the facts themselves, but by their relation to other circumstances, and to the previous habits and character of the individual. There are many peculiarities and eccentricities of character which do not constitute insanity; and the same peculiarities may afford reason for suspecting insanity in one person and not in another;—namely, when in the former, they have appeared suddenly, and are much opposed to his previous uniform character; while, to the latter, they have been long known to be habitual and natural. Thus, acts of thoughtless prodigality and extravagance, may, in one person, be considered entirely in accordance with his uniform character; while the same acts, committed by a person formerly distinguished by sedate and prudent conduct, may give good ground for suspecting insanity;—and in fact constitute a form in which the affection very often appears. In ordinary cases of insanity, a man's conduct is to be tried by a comparison with the average conduct of other men; but, in many of the cases now referred to, he must be compared with his former self.

"Another caution is to be kept in mind, respecting the mental impressions of the individual in these or suspected cases of insanity;—that an impression, which gives reason for suspecting insanity in one case, because we know it to be entirely unfounded and imaginary, may allow of no such conclusion in another, in which it has some reasonable or plausible foundation. Insane persons indeed often relate stories which hang together so plausibly and consistently, that we cannot say whether we are to consider them as indicative of insanity, until we have ascertained whether they have any foundation, or are entirely imaginary. The same principle applies to the antipathies against intimate friends which are often so remarkable in the insane. They may be of such a nature as decidedly to mark the hallucination of insanity,—as when a person expresses a dislike to a child, formerly beloved, on the ground that he is not really his child, but an evil spirit which has assumed his form. This is clearly insanity; but if the antipathy be against a friend or relative, without any such reason assigned for it, we require to keep in view the inquiry, whether the impression be the result of hallucination, or whether the relative has really given any ground for it. In all slight or doubtful cases, much discretion should be used in putting an individual under restraint, and still more in immediately subjecting him to confinement in an asylum for lunatics. But there is one modification in which all such delicacy must be dispensed with,—namely, in those melancholic cases which have shown any tendency to suicide. Whenever this propensity has appeared, no time is to be lost in taking the most effectual precautions; and the most painful consequences have very often resulted, in cases of this description, from misplaced delicacy and delay.

"Some of the points which have been briefly alluded to, seem to bear on the practical part of this important subject,—the moral treatment of insanity. Without entering on any lengthened discussion, some leading principles may be referred to the following heads:—

"I. It will be generally admitted, that every attempt to reason with a maniac is not only fruitless, but rather tends to fix more deeply his erroneous impression. An important rule, in the moral management

of the insane, will therefore probably be, to avoid every allusion to the subject of their hallucination, to remove from them every thing calculated by association to lead to it, and to remove them from scenes and persons likely to recall or keep up the erroneous impression. Hence, probably, in a great measure, arises the remarkable benefit of removing the insane from their usual residence, friends and attendants, and placing them in new scenes, and entirely under the care of strangers. The actual effect of this measure is familiar to every one, who is in any degree conversant with the management of the insane. That the measure may have its full effect, it appears to be of importance that the patient should not, for a considerable time, be visited by any friend or acquaintance; but should be separated from every thing connected with his late erroneous associations. The danger also is well known which attends premature return to home and common associates;—immediate relapse having often followed this, in cases which had been going on for some time in the most favourable manner.

"II. Occupation. This is referable to two kinds, namely, bodily and mental. The higher states of mania, in general, admit of no occupation; but, on the contrary, often require coercion. A degree below this may admit of bodily occupation, and, when this can be accomplished in such a degree as fully to occupy the attention, and produce fatigue, there is reason to believe that much benefit may result from it. On a similar principle it is probable, that in many cases much benefit might result from moral management calculated to revive associations of a pleasing kind, in regard to circumstances anterior to the occurrence of the malady.

"III. Careful classification of the insane, so that the mild and peaceful melancholic may not be harassed by the ravings of the maniac. The importance of this is obvious; but of still greater importance it will probably be, to watch the first dawnings of reason, and instantly to remove the patient from all associates by whom his mind might be again bewildered.

"Cases of decided insanity in general admit of little moral treatment, until the force of the disease has been broken in some considerable degree. But among the numerous modifications which come under the view of the physician, there are various forms in which, by judicious moral management, a great deal is to be accomplished. Some of these affections are of a temporary nature, and have so little influence on a man's general conduct in life, that they are perhaps not known beyond his own family or confidential friends. In some of these cases, the individual is sensible of the singular change which has taken place in the state of his mental powers, and laments the distortion of his feelings and affections. He complains, perhaps, that he has lost his usual interest in his family, and his usual affection for them; and that he seems to be deprived of every feeling of which he was formerly susceptible. The truth is, that the mind has become so occupied by the erroneous impression, as to be inaccessible to any other, and incapable of applying to any pursuit, or following out a train of thought.

"A most interesting affection of this class often comes under the observation of the physician, consisting of deep but erroneous views of religion,—generally accompanied with disturbed sleep, and considerable derangement of the system, and producing a state of mind closely bordering upon insanity. It occurs most commonly in young persons of acute and susceptible feelings, and requires the most delicate and cautious management. Two modes of treatment are frequently adopted in regard to it, both equally erroneous. The one consists in hurrying the individual into the distraction of company, or a rapid journey; the other, in urging religious discussions, and books of profound divinity. Both are equally injudicious, especially the latter; for every attempt to discuss the important subject, to which the distorted impression refers,

only serves to fix the hallucination more deeply. The mode of treatment, which I have always found most beneficial, consists of regular exercise, with attention to the general health; and in enforcing a course of reading of a nature likely to nx the mind, and carry it forward in a connected train. Light reading or mere amusement will not answer the purpose. A regular course of history, as formerly mentioned, appears to succeed best, and fixing the attention by writing out the dates and leading events in the form of a table. When the mind has been thus gradually exercised for some time in a connected train of thought, it is often astonishing to observe how it will return to the subject which had formerly overpowered it, with a complete dissipation of former erroneous impressions. A common complaint at the commencement of such an exercise is, that the person finds it impossible to fix the attention, or to recollect the subject of even a few sentences: this is part of the disease, and, by perseverance, gradually disappears. This experiment I have had occasion to make many times, and it has always appeared to me one of extreme interest. I do not say that it has uniformly succeeded, for the affection frequently passes into confirmed insanity; but it has succeeded in a sufficient number of instances to give every encouragement for a careful repetition of it. The same observations, and the same mode of treatment, apply to the other forms of partial hallucination. The plan is, of course, to be assisted by regular exercise, and attention to the general health, which is usually much impaired. The affections are particularly connected, in a very intimate manner, with a disordered state of the stomach and bowels, and with derangements in the female constitution. Means adapted to these become, therefore, an essential part of the management.

"In that remarkable obliteration of the mental faculties, on the other hand, which we call idiocy, fatuity, or dementia, there is none of the distortion of insanity. It is a simple torpor of the faculties, in the higher degrees amounting to total insensibility to every impression; and some remarkable facts are connected with the manner in which it arises without bodily disease. A man mentioned by Dr. Rush, was so violently affected by some losses in trade, that he was deprived almost instantly of all his mental faculties. He did not take notice of any thing, not even expressing a desire for food, but merely taking it when it was put into his mouth. A servant dressed him in the morning, and conducted him to a seat in his parlour, where he remained the whole day, with his body bent forward, and his eyes fixed on the floor. In this state, he continued nearly five years, and then recovered completely and rather suddenly. The account which he afterwards gave of his condition during this period was, that his mind was entirely lost; and that it was only about two months before his final recovery, that he began to have sensations and thoughts of any kind. These at first served only to convey fears and apprehensions, especially in the nighttime.

"The most striking illustration of the various shades of idiocy, is derived from the modifications of intellectual condition observed in the Cretins of the Vallais. These singular beings are usually divided into three classes, which receive the names of cretins, semi-cretins, and cretins of the third degree. The first of these classes, or perfect cretins, are, in point of intellect, scarcely removed above mere animal life. Many of them cannot speak, and are only so far sensible of the common calls of nature, as to go, when excited by hunger, to places where they have been accustomed to receive their food. The rest of their time is spent, either in basking in the sun, or sitting by the fire, without any trace of intelligence. The next class, or semi-cretins, show a higher degree of intelligence; they remember common events, understand what is said to them, and express themselves in an intelligible manner on the most common subjects

They are taught to repeat prayers, but scarcely appear to annex any meaning to the words which they employ; and they cannot be taught to read or write, or even to number their fingers. The cretins of the third degree learn to read and write, though with very little understanding of what they read, except on the most common topics. But they are acutely alive to their own interest, and extremely litigious. They are without prudence or discretion in the direction of their affairs, and the regulation of their conduct; yet obstinate, and unwilling to be advised. Their memory is good as to what they have seen or heard, and they learn to imitate what they have observed in various arts, as machinery, painting, sculpture, and architecture; but it is mere imitation without invention. Some of them learn music in the same manner; and others attempt poetry of the lowest kind, distinguished by mere rhyme. It is said, that none of them can be taught arithmetic, but I do not know whether this has been ascertained to be invariably true;—there is no doubt that it is a very general peculiarity.

"The imbecile in other situations, show characters very analogous to these. Their memory is often remarkably retentive; but it appears to be merely a power of retaining facts or words in the order and connexion in which they have been presented to them, without the capacity of tracing relations, and forming new associations. In this manner, they sometimes acquire languages, and even procure a name for a kind of scholarship; and they learn to imitate in various arts, but without invention. Their deficiency appears to be in the powers of abstracting, recombining, and tracing relations; consequently they are deficient in judgment, for which these processes are necessary. The maniac, on the other hand, seizes relations acutely, rapidly, and often ingeniously,—but not soundly. They are only incidental relations, to which he is led by some train of association existing in his own mind; but they occupy his attention in such a manner, that he does not admit the consideration of other relations, or compare them with those which have fixed themselves upon his mind.

"The states of idiocy and insanity, therefore, are clearly distinguished in the more complete examples of both; but many instances occur in which they pass into each other, and where it is difficult to say to which of the affections the case is to be referred. I believe they may also be, to a certain extent, combined; or that there may be a certain diminution of the mental powers existing along with that distortion which constitutes insanity. They likewise alternate with one another; maniacal paroxysms often leaving the patient in the intervals in a state of idiocy. A very interesting modification of another kind is mentioned by Pinel. Five young men were received into the Bicêtre, whose intellectual faculties appeared to be really obliterated; and they continued in this state for periods of from three to upwards of twelve months. They were then seized with paroxysms of considerable violence, which continued from fifteen to twenty-five days, after which they all entirely recovered.

"Idiocy can seldom be the subject either of medical or moral treatment; but the peculiar characters of it often become the object of attention in courts of law, in relation to the competency of imbecile persons to manage their own affairs; and much difficulty often occurs in tracing the line between competency and incompetency. Several years ago, a case occurred in Edinburgh, which excited much discussion, and shows in a striking manner some of the peculiarities of this condition of the mental faculties. A gentleman of considerable property having died intestate, his heir-at-law was a younger brother, who had always been reckoned very deficient in intellect; and consequently his relatives now brought an action into the Court of Session, for the purpose of finding him incompetent, and obtaining the authority of the Court for putting him under trustees. In the investigation

of this case, various respectable persons deponed, that they had long known the individual, and considered him as decidedly imbecile in his understanding, and incapable of managing his affairs. On the other hand, most respectable evidence was produced, that he had been, when at school, an excellent scholar in the languages, and had repeatedly acted as a private tutor to boys; that he was remarkably attentive to his own interest, and very strict in making a bargain; that he had been proposed as a candidate for holy orders, and, on his first examination in the languages, had acquitted himself well; but that, in the subsequent trials, in which the candidate is required to deliver a discourse, he had been found incompetent. The Court of Session, after long pleadings, decided that this individual was incapable of managing his affairs. The case was then appealed to the House of Lords, where, after further protracted proceedings, this decision was affirmed. I was well acquainted with this person, and was decidedly of opinion that he was imbecile in his intellects. At my suggestion, the following experiment was made, in the course of the investigation. A small sum of money was given him, with directions to spend it, and present an account of his disbursement, with the addition of the various articles. He soon got rid of the money, but was found totally incapable of this very simple process of arithmetic, though the sum did not exceed a few shillings. This individual, then, it would appear, possessed the simple state of memory which enabled him to acquire languages, but was deficient in the capacity of combining, reflecting, or comparing. His total inability to perform the most simple process of arithmetic, was a prominent character in the case, analogous to what I have already stated in regard to the Cretins. In doubtful cases of the kind, I think this might be employed as a negative test with advantage; for it probably will not be doubted, that a person who is incapable of such a process, is incompetent to manage his affairs.

"It is a singular fact, that the imbecile are, in general, extremely attentive to their own interest, and perhaps most commonly cautious in their proceedings. Ruinous extravagance, absurd schemes, and quixotic ideas of liberality and magnificence, are more allied to insanity;—the former may become the dupes of others, but it is the latter, who are most likely to involve and ruin themselves.

"Before leaving the subject of Insanity, there is a point of great interest, which may be briefly referred to. It bears in a very striking manner upon what may be called the pathology of the mental powers; but I presume not to touch upon it, except in the slightest manner. In the language of common life, we sometimes speak of a moral insanity, in which a man rushes headlong through a course of vice and crime, regardless of every moral restraint, of every social tie, and of all consequences, whether more immediate or future. Yet if we take the most melancholy instance of this kind that can be furnished by the history of human depravity, the individual may still be recognised, in regard to all physical relations, as a man of a sound mind; and he may be as well qualified as other men, for the details of business, or even the investigations of science. He is correct in his judgment of all the physical relations of things, but, in regard to their moral relations, every correct feeling appears to be obliterated. If a man, then, may thus be correct in his judgment of all physical relations, while he is lost to every moral relation, we have strong ground for believing, that there is in his constitution a power, distinct from reason, but which holds the same sway over his moral powers, that reason does among his intellectual; and that the influence of this power may be weakened or lost, while reason remains unimpaired. This is the moral principle, or the power of conscience. It has been supposed by some to be a modification of reason, but the considerations now referred to appear to favour the opi-

nion of their being distinct. That this power should so completely lose its sway, while reason remains unimpaired, is a point in the moral constitution of man which it does not belong to the physician to investigate. The fact is unquestionable; the solution is to be sought for in the records of eternal truth." (Dr. Abercrombie *on the Intellectual Powers, page* 302, *et seq.)*

INTERMITTENT Fever. *See* Ague.

INTOXICATION. The phenomena of intoxication are too well known to need any description. They are induced by a variety of substances; many of which may be so combined and modified, as to produce effects on the body, useful for the cure or mitigation of disease. The principal intoxicating substances are opium, which is much used in the east to procure serenity and cheerfulness; bang, prepared from the Indian hemp *(Cannabis Indica)*, stramonium, tobacco, henbane; above all, fermented liquors, wine and, spirits. "Spirituous liquors animate, and for a time, the natural vigour is more active; but this effect is fleeting. If they are often repeated, or too freely used, their excess of action enervates the constitution; the appetite and the digestion are impaired, the spirits fail, and a general feebleness ensues. To relieve the effects of ebriety, we must employ moderate stimulants and tonics, particularly those which contain no portion of ardent spirits. The most effectual are the Bath waters, carbonate of ammonia, or even the pure alkali, light bitters, with aromatics. The action of the liver should be assisted by calomel and other purgatives. The most difficult, but the most essential part of the cure, is to prevent the continuance of the practice. This can be seldom obtained." The beginning of the practice, therefore, should be carefully guarded against. We feel some reluctance to quote the passage immediately subjoined, lest we should even seem to give any encouragement to the vice which demands such remedies. "When the over night's potation has been too liberal, a wet napkin should be bound round the head; a quantity of cold water should be placed at the bed-side, and if a restlessness comes on, with heat, a dryness of the tongue, &c. this water should be drunk as freely as the thirst requires: thus, by degrees, a perspiration is produced, and the most effectual relief obtained. On the succeeding day, abstemiousness is requisite; and such a regimen is to be pursued, as is consistent with the nature of the constitution. A man of a strong healthy plethoric habit should drink plentifully of thin, warm diluting liquids, mixed with vegetable acids; keep in bed, and promote perspiration. The weak, delicate, and relaxed, besides abstinence from solid diet, should ride on horseback, or take some other gentle exercise in the pure air; a glass or two of generous wine, as a cordial, may be allowed, or such other means pursued as are calculated to invigorate the system, and keep up an increased state of insensible perspiration. To the most violent effects of fermented spirits, vinegar is an antidote. A sponge dipped in vinegar should be frequently applied to the mouth and nose; an emetic that operates quickly should be given; a clyster, and after it, a purging draught, may be administered; and a gentle sweat promoted." (Dr. Parr.)

INTUS-SUSCEPTION means, that one part of the intestinal canal is received within another part as in a sheath, by which the inclosed portion is strictured, and great pain of the bowels, and danger to life ensue, in consequence of inflammation thus excited. It is not very easily distinguished from similar disorders of the bowels, but it is to be treated on the same principles, viz. reducing inflammation, bringing about relaxation of the bowels by the warm bath, or by clysters of infusion of tobacco. Infants are not unfrequently attacked with intus-susception of the bowels, from exposure to cold, from worms, and from the operation of too violent purgative medicines. When this disease is discovered in time, leeches, fomentations, and some active purge are to be resorted to.

INUNCTION. The rubbing in of substances on the surface of the body for medicinal purposes. Thus mercury is often introduced into the system by *inunction*.

INWARD FITS OF INFANTS. We have placed this title, principally to introduce the following quotation from Dr. Underwood: "I know of no complaint that ought to be termed *inward fits*; and I mention this, because nurses are continually talking to us about them when children are perfectly well; and often give the fond parent needless distress, as well as many an unpleasant medicine to the child. They are at the same time treating the true convulsion, whilst slight, in the same way, being led into the error by the idea of inward fits, a term they are ever using, but have no precise ideas of. It were therefore better, perhaps, the term were altogether abolished; as the child is either evidently convulsed, or has no kind of fit, at least none for which any remedy can be offered." (*Diseases of Children.*)

IODINE. A chemical substance discovered at Paris in 1812, obtained by certain processes from the ashes of marine plants, and introduced into medicine with considerable advantage, in the case of swellings of the glands of the neck. The burnt sponge was formerly prescribed for such swellings, and had totally lost its reputation; till the discovery that it contained iodine, restored hope of its being of some benefit, and showed the grounds on which such a hope rested. The forms in which iodine is used, are the tincture, of which the dose at first is ten drops a-day in any viscid liquor, as gum, syrup, or gruel; or the hydriodate of potassa, of which the dose is about the same quantity. Ointments are also made with iodine, in the proportion of one drachm of hydriodate of potassa to three drachms of lard; and of this ointment, a piece about the size of a hazel nut is to be rubbed in upon the swelling night and morning. Very unexpected diminution of enlarged glands has followed the use of this substance. In some cases, it produces feverish symptoms, thirst, restlessness, and diarrhœa; in which event, it should be discontinued, and the proper remedies applied to the injurious symptoms.

IPECACUAN, *Callicocca Ipecacuanha.* The root of a plant found in Brazil, which furnishes us with one of the best and safest of our emetics. The introduction of this celebrated root into medical practice was chiefly owing to Helvetius, grandfather of the celebrated author of the work *De l'Esprit*, who came from Holland to Paris very young to practise medicine. He attended and cured a drug merchant, who paid him with a packet of the root from Brazil called Ipecacuanha. After some experiments in the hospitals, Helvetius found it possessed the virtue of curing the dysentery. Before the end of thirty-two years, he had made 100,000 crowns by the cure of that disease. Louis XIV. gave him a thousand louis for his secret. So famous was the success of the root, that it obtained the name of *Radix anti-dysenterica.* If it did good in pure dysentery, it must have been by maintaining a steady motion of the intestines downwards, and perhaps by determining to the skin; but in modern practice, we employ medicines of greater certainty in that very distressing, and, in warm climates, dangerous disease. For every purpose for which an emetic is advisable, no better than ipecacuan can be desired. Even an overdose has merely the effect of producing too hasty an evacuation of the stomach, but without any bad effects. It may be given as an emetic to very young children, and is not followed by the debilitating exhaustion induced by metallic and other emetics. The root is reduced to powder, and the dose for a grown-up person is from fifteen to twenty grains, for a child above a few weeks old, from six to twelve grains according to the age. White wine extracts the emetic properties of ipecacuan; and the ipecacuan wine is a very good form of administering it, provided there be no great degree of fever present. To a child, a tea-spoonful

of the wine may be given every ten minutes till it operates. Like other emetics, or perhaps with virtues superior in this respect, it proves an excellent expectorant; and may be taken for this purpose, in doses of three or four grains three times a-day; or made up into lozenges, with some sweet or aromatic substance; the ipecacuan lozenges contain half a grain each. In nauseating doses, ipecacuan is very useful in hæmorrhagies from the lungs and uterus. In dysentery, it may be used as an auxiliary to other means. Combined with opium, it forms the celebrated Dover's powder, now called the powder of ipecacuan and opium, a very effectual sudorific; and for its soothing effects in colds, rheumatisms, and various instances of disordered bowels, one of the most salutary compositions of the pharmacopœia.

IRIS. The coloured circle at the anterior part of the eye, which by its contracting in a bright light, and dilating in a moderate one, regulates the admission of light according to varying circumstances. The iris is subject to inflammation, producing very violent symptoms; it is cut to form an artificial pupil. *See* EYE *and its Diseases.*

IRIS. The botanical name for the Florentine orris. The root, dried and powdered, enters into the composition of some dentifrices.

IRON. This metal, so widely diffused through nature, so essential in its metallic form, and its larger aggregations, to the comfort, and even to the existence of civilized society, is capable of entering into various chemical combinations, which render it fit to be taken into the body, and capable of producing various salutary effects. These are principally of a tonic or strengthening nature. The preparations of iron most in use, are the carbonate, the sulphate, and the tincture of muriate of iron; steel filings are also used, in the view of their being oxidated in the stomach and intestines in consequence of the minuteness of their division. The doses of the various preparations of iron, when used as tonics, are the following: Of the carbonate, from ten to fifteen grains may be taken in any tenacious substance, as jelly, honey, or the like; of the sulphate, one or two grains may be rubbed together with aromatic powder, and taken at first once, then twice a-day; of the tincture of muriate of iron, ten drops may be given in water twice a-day, increasing them to twenty or thirty. The metallic iron for internal use is commonly inclosed in sweetmeats, and known by the name of steel caraways, the dose of which is a matter of no great nicety. The carbonate of iron has of late been celebrated for other virtues than those of a mere tonic, and has been thought serviceable in the painful affection of the face called the tic douleureux, and also in cancer. The dose for this purpose is ten grains four times a-day. A watery solution of the tartrate of potass and iron is recommended as a chalybeate, particularly suited to children from its tasteless quality. Patients who are using any of the preparations of iron are apt to be very much alarmed at the black appearance of the stools; but it is merely a consequence of the iron, and will go off when it is discontinued.

IRRITABILITY is that power inherent in muscular fibres, by which they are susceptible of contraction, either in consequence of volition or the application of stimuli. On the nature of irritability there have been many disputes among physiologists, which it would be tedious and unprofitable to enumerate here. Irritability, according to Haller, differs greatly from sensibility; for many irritable parts are not sensible, and organs which are both irritable and sensible have by no means those qualities in the same or any proportional degree. The intestines, he remarks, are less sensible than the stomach, though more irritable; and the heart is an organ peculiarly irritable, though by no means sensible. Irritability, or the power of contraction, is exhausted by exercise and recruited by rest. Muscles which act slowly and re-

gularly, preserve their irritability longer than those which act with violence.

Irritability is applied in a sense half medical half ethical, to that mobile, fretful state, which is morbidly alive to every impression. Persons in this state are also called *nervous*. *See* NERVOUS.

IRRITATION. This term has been used ambiguously in medical writings, but its most obvious meaning is to express that state of uneasiness or excitement from which we are anxious to be freed, which is produced by some mechanical or chemical acrid, as a thorn under the skin, or hartshorn in the nose. Constitutional irritation is produced by substances applied to the body, as cantharides, by matters disagreeing with the stomach, by poisons, by surgical operations, by burns, fractures, wounds, and other injuries. Several morbid actions are considered as arising from irritation, though that may not be obvious to the senses at the place where it is applied; thus, convulsions are owing to worms irritating the intestines, or to the irritation of the gums in teething. It has been properly observed, that privations occasion symptoms of irritation. Thus hunger produces restlessness and anxiety; and the sudden emptying of any cavity, the want of the usual tension either from external pressure or internal fulness, will occasion uneasiness, which has been styled a symptom of irritation.

ISINGLASS, or FISH GLUE is prepared from several species of the sturgeon, and imported from Russia. A nutritious jelly may be formed from it. A solution of it in water is used to clarify spirituous liquors. Isinglass is employed in the preparation of English court plaster.

ISSUE. A method of forming an artificial discharge from the body, for the prevention or cure of diseases. This is done by the introduction of foreign bodies or of irritating dressings, which occasion a discharge of purulent matter. The principal methods of effecting this, are the pea-issue, the seton, and the issue by slough or eschar. The way to make the pea-issue, is to pinch up, and cut through a portion of the skin, of such a size as to hold one or two peas according to the extent of the issue we want; the peas are then introduced into the wound, and are covered up with adhesive plaster for three or four days, by which time the discharge of matter is fairly begun; the peas are then taken out, fresh ones are put in, and this is continued every day while we wish to keep the issue open. To make an issue by a seton, we introduce a skein of silk into a broad needle, and push the needle through the skin, bringing it out at a greater or less distance from the place of its insertion, according to the quantity of matter we wish to be daily discharged. When the needle is pushed through the skin, we fasten the silk so as to allow a fresh portion to be applied to the internal surface of the wound every day. The issue by eschar is made by applying some acrid or caustic matter to destroy a portion of the skin, and when this dead portion is destroyed and has fallen out, the ulcerated surface below is to be dressed with any irritating ointment proper to keep up the discharge. Care must be taken not to destroy more of the skin than we want. A piece of leather, covered with adhesive plaster, is to have a hole cut in it of the size we wish the issue to be: this is to be applied to the place intended, and the skin opposite to the hole to be rubbed with caustic potash moistened with water, till the whole part which we wish to be destroyed puts on a dark and corroded appearance. Any superfluous caustic is to be carefully washed off; the plaster is to be removed, and a poultice to be put on the part. In a few days, the eschar drops off, and leaves a raw surface, which may either be filled with peas, beads, or similarly formed substances; or may be dressed with savine ointment, or basilicon, to promote the discharge of matter. The employment of issues in the cure of diseases, or in the prevention of various morbid affections, is sanctioned by long experience; and the cases in which they

are useful are very numerous. In giddiness, ringing of the ears, flushed countenance, and other symptoms showing too much tendency to the head, and threatening apoplexy or palsy, an issue in the neck, combined with other means, may not only remove the impending danger, but, if persisted in, may secure the patient from any future attack of the kind, and even restore health when the attack has been suffered. In diseases of the spine, of the hip-joint, and of the knee-joint, issues are one of the principal remedies on which we rely. In scrofula, by keeping up a discharge from a place that is usually covered, we may prevent runnings and unsightly scars about the neck and face.

The benefits arising from the use of issues, form a counterpart to what we see of the bad effects of healing an ulcer, to which a person has been long accustomed. In such cases, it is not uncommon to find the drying up of old sores followed by headach, or by affections of the chest, or other symptoms of ill health; and it is always a matter of prudence to provide some other drain, before we attempt to cure such habitual sores.

ITCH. A well known cutaneous disease, *supposed* to be peculiarly prevalent in Scotland, but by no means unknown in other countries. It commonly arises from infection communicated by touching the body or clothes of a person already infected, or by using the same bed-clothes as those who have it. It is greatly owing to the want of cleanliness, and seems much to affect the inhabitants of cold countries; but the use of oatmeal, which has been blamed as occasioning the itch, does not deserve this reproach. The itch is shown in small pimples about the fingers, the wrists, the thighs, and the middle of the body; it attacks every place except the face: the itching is very troublesome, and the scratching, by breaking the pustules, causes the disease to spread still more. Sometimes the pustules are large, and filled with purulent matter like boils. This purulent kind principally occurs in children between the age of seven and fourteen. The irritation of itch is almost entirely local, and does not produce general fever. In some species of itch, but not often, minute insects are found in the reddish streaks or furrows *near* the pustules, but not in them; but in the vast majority of cases the communication of the disease does not depend on the transference of insects, but on that of matter.

Cure. For this filthy disease, sulphur is an effectual and long established remedy. It may be taken internally, or applied to the skin, formed into an ointment with lard or butter. The parts affected are to be well rubbed every night; or if they are very extensive, one half may be rubbed in the morning, and the other in the evening. Five or six applications commonly cure the disease; but it is prudent to continue the rubbing for a few days after the cure is apparently completed. The only objection to the sulphur is its disgusting smell and appearance. These may be disguised by the addition of strong smelling perfumes composed of essential oils, and other substances; and in order to cure the disease without sulphur, various other remedies have been tried. The root of the white hellebore made into an ointment, or a decoction, has been known to cure the itch; it is said to be one of the ingredients, along with sal-ammoniac, in the Edinburgh itch ointment, (not, however, made in Edinburgh, but in London.) Sulphuric acid has also been recommended, and corrosive sublimate. But for common and general use, nothing ought to supersede the almost unfailing powers of sulphur.

J

JALAP, *Convolvulus Jalapa*, a plant growing at Xalapa in Mexico, the powdered root of which is a very useful and much employed purgative. The dose is from ten to twenty grains, but it is not often used by itself, but commonly conjoined with calomel, in the proportion of one part of calomel to two of jalap; the dose of such a purge for an adult of good strength is five grains of calomel to sixteen of jalap, to be taken in jelly, honey, or any viscid substance, to prevent the calomel falling down by its great weight. To form a very drastic or active purge, as may be desirable in some affections of the head, or with the view of bringing off a large quantity of water in dropsies, a purge may be formed by joining together six grains of aloes, ten of jalap, and five of scammony or gamboge; the watery stools produced by such a dose are sometimes of a surprising quantity, and give very great relief.

JALAP, Compound Powder of. Another most useful form of employing jalap, is by combining it with cream of tartar; constituting the compound powder of jalap, one of the most manageable of purgatives, which with most persons acts very speedily and safely, and not only evacuates the bowels, but for the time increases the flow of urine. The proportions are one part of jalap to two of cream of tartar; and the dose of the compound powder is from forty grains to sixty. It may be taken in plain water, gruel, beer, or any liquid most convenient for the patient.

JAMES'S POWDER. Dr. James, the contriver of the celebrated antimonial powder which bears his name, published a Medicinal Dictionary in 1743, which he dedicated to Dr. Mead. He was the early friend of Samuel Johnson, at Lichfield, before he came to settle in the metropolis. As his character was respectable, it is with regret we see his name associated with a nostrum. "The pulvis antimonialis, (oxide of antimony with phosphate of lime, of the Edinburgh Pharmacopœia,") says Dr. Paris, "was introduced into the pharmacopœia as the succedaneum for the celebrated fever-powder of Dr. James, the composition of which was ascertained by Dr. George Pearson. It consists of 43 parts of the phosphate of lime, mixed, or perhaps chemically combined, with 57 parts of oxide of antimony, of which a portion is vitrified; and it is probable that the difference of the two remedies depends principally upon the quantity of oxide which is vitrified: the specification of the original medicine is worded with all the ambiguity of an ancient oracle, and cannot be prepared by the process as it is described. Experience has established the fact, that James's powder is less active than its imitation; it affects the stomach and bowels very slightly, and passes off more readily by perspiration; in general, however, the difference is so inconsiderable, that we need not regret the want of the original receipt. As it is quite insoluble in water, it should be given in powder, or made into pills. It is diaphoretic, alterative, emetic, or purgative, according to the extent of the dose and the state of the patient; in combination it offers several valuable resources to the intelligent practitioner. The dose is from three to five grains. But it may be fairly questioned whether this remedy has not been far too highly appreciated. Dr. James was certainly very successful in its use; but it must not be forgotten that he usually combined it with some mercurial, and always followed it up with bark." (Dr. Paris's *Pharmacologia.)*

JAUNDICE. A disease characterised by a universal yellowness of the skin, and of the white of the eyes; itching of the surface of the body, a white or clay-like appearance of the stools; while the urine tinges linen of a yellow colour. The disease is attended by a sense of weariness and languor, a feeling of pain or uneasiness about the pit of the stomach, and there is sometimes a slight difficulty of breathing. There is also sickness, vomiting, sourness of stomach, and various other symptoms of indigestion. There is sometimes an acute pain on the right side, below the margins of the ribs. There is not, in general, much fever. It is a vulgar error to believe that patients in jaundice see objects of a yellow colour.

Causes. The liver is a very large gland, which secretes a great quantity of bile for the purposes of digestion. This fluid, well known by the name of gall, passes into the intestines not many inches below the lower opening of the stomach, it there mixes with the food, passes on, stimulates the intestines, and imparts their usual colour to the excrements. When any thing prevents the bile getting into the intestines after it is formed in the liver, certain vessels absorb it, carry it into the mass of blood with which it mixes, and giving it the yellow colour, is seen through the skin and vessels; and more particularly shows itself in those vessels where there is usually not red blood, but clear lymph, as in the eyes. The bile not going where it should, to assist digestion, that function is disordered; and the stools, deprived of bile, put on the appearance of whitish clay. The circumstances which prevent the bile from getting into the intestines are various; one of the most frequent is the formation of concretions, or what are called gall-stones, either in the passage leading from the gall-bladder, or that from the liver itself; these stones get into the common passage leading into the intestines, and so obstruct the entrance of the bile. Or there may be a spasm or irregular contraction in the tube itself, and this may continue long enough to allow the bile to be absorbed into the blood, and so give rise to jaundice; or there may be a degree of inflammation, causing a thickening of the sides of the tube, and this may be temporary or permanent. Other organic diseases may take place about the liver itself or the neighbouring organs, and whatever obstructs to a great degree, or totally obliterates the passage into the intestines, will occasion jaundice. The cases which are most frequently recovered from, are those in which the obstruction is caused by gall-stones; when these, by dilating the tube, open for themselves a passage into the intestines, and allow one also for the bile to the same place, the disease very quickly subsides. But if there be any invincible organic obstruction, the disease is incurable.

Treatment. If we have reason to think that gall-stones are the cause of jaundice, which we do, among other reasons, from finding occasionally some small ones mingled with the fæces, we are to try to dislodge them by a prudent use of emetics. We not unfrequently succeed by the use of antimonials, but we must be careful not to repeat them too frequently, lest we do harm by fixing the gall-stones more than before, and lest we weaken further the powers of digestion already impaired. We are to give chamomile tea with a little tincture of aloes, or soap pills with rhubarb, as bitters, to endeavour to supply the deficiency of bile. As calomel is particularly efficacious in stimulating the extremity of the gall-duct, and causing it to discharge its contents into the bowels, it is to be given with the view of soliciting the descent of the stone; and for the same purpose, exercise, especially on horseback, is to be recommended. The itching of the skin is to be alleviated by the warm bath; and when there is much pain without fever, an opiate will be useful; but when there is heat, thirst, fixed pain, and difficulty of breathing, blood-letting, purging, blistering, and antiphlogistic remedies will be proper. When the acute symp-

toms last mentioned accompany jaundice, they probably indicate not the passing of a gall-stone, but inflammation in that region, which indeed may be owing to the excitement caused by the passage of too great a calculus. Our treatment in that case, must not be by emetics, bitters, and exercise, but by the remedies calculated to subdue inflammation. When the pain is not constant, but intermits occasionally, it is probably owing to spasm, and must be treated by opiates and the warm bath. In the organic affections, which we suspect when the disease is obstinate and protracted, we can only palliate symptoms, attending to the bowels, and giving bitters, soap, and alkalis; trying a course of mercury, if we judge the patient has strength to bear it. The severe and sometimes fatal jaundice of infants, called the yellow gum, has been treated of under the article GUM.

JAWS. Anatomists describe the bones of the face as composed of the upper and lower jaws. In the margin of these, the teeth are placed. The upper jaw consists of thirteen bones; the lower jaw of a single bone. The upper jaw is immoveable; the under one is articulated with the temporal bone; and has several muscles attached to it, which enable it to move with great force upwards and downwards, while too much motion to either side is prevented by strong ligaments. The lower jaw is the principal agent in chewing, swallowing, and speaking. The lower jaw is sometimes dislocated, and this generally when the mouth is open. The accident, of course, impedes the functions of chewing, of speaking, and of retaining the saliva; and no time should be lost in attempting the reduction. The surgeon is to wrap some coarse linen round his thumbs, to introduce the thumbs thus guarded, back upon the grinding teeth; to push them downward, while with his fingers he endeavours to push the jaw upward at the chin. This generally replaces it. The luxation is to be prevented from recurring by a proper bandage, and by avoiding for some time the use of food requiring mastication.

JELLY. A substance which coagulates when we press out the juice of ripe currants, gooseberries, and many fruits, and allow it to rest for some time. The jelly of different fruits is preserved with sugar for domestic purposes; and its grateful acidity renders it of signal benefit in many feverish disorders, and diseases of the throat and mouth. When dissolved in water, jelly forms a cooling, pleasant drink. Animal jelly is more correctly termed gelatine, under which article we have given an account of its properties and uses. *See* GELATINE.

JESUITS' BARK. The Peruvian bark is so called, because the Jesuits imported large quantities of it from South America into Europe. *See* BARK.

JUGULAR VEINS, the large veins running along the sides of the neck, which convey back to the heart the blood collected after circulating in the head. In disorders of the head, and in inflammatory affections of the throat and neighbouring parts, in croup, and some other disorders, it is sometimes of considerable consequence to take away blood quickly from the neighbourhood of the part; and in such cases, this is successfully accomplished by opening the jugular vein.

JUNIPER, *Juniperus communis.* The fruit of the juniper contains an essential oil, possessed of diuretic powers; and it is this oil that gives to gin its diuretic properties, and renders it the best spirituous liquor to allow, if any be allowed at all, to patients labouring under dropsy. The essential oil of juniper may be given to promote the flow of urine, in the dose of from two to ten drops upon white sugar, or formed into an emulsion with a drachm or two of the sweet spirit of nitre.

K

KAJEPUT OIL. *See* CAJEPUT.

KALI. The old name for potash. *See* POTASH.

KIDNEY. An organ situated at the back part of the loins, one on each side, in which the urine is secreted. From the kidneys, it passes by two long tubes, called the ureters, into the bladder. The kidneys are subject to various diseases of a very painful kind, to inflammation, and to the formation of calculous concretions in them, giving rise to many distressing symptoms.

KIDNEY, *Inflammation of*, is known by a severe pain in the back part of the loins, the urine is of a deep red colour, and voided in small quantity at a time, and very frequently; thirst, heat, quickened pulse, and the usual symptoms of fever attend. A pain stretches from the kidney to the bladder, and vomiting is very frequently present.

Causes. The principal causes of inflammation in the kidneys are external violence applied near the part, strains of the back and loins, hard riding, exposure to cold, certain acrid substances taken into the stomach, as cantharides, and some of the balsams: the presence of sand or gravel may also give rise to inflammation. There are certain habits of body peculiarly disposed to inflammatory affections of the kidney, especially the gouty; and it is a well known observation, that the females of gouty families are subject to diseases of the kidneys, while the males have the gout in its regular form on the extremities.

Prognosis. The danger of the disease is to be estimated from the severity of the symptoms, and from the quantity and appearance of the urine which is passed. If there be a remission of the pain and fever, a copious flow of urine and general perspiration, we may have hopes of a favourable termination of the case. If the disease continues seven or eight days, if the pain in the part becomes dull and heavy, if the patient is affected with frequent shiverings, there is reason to fear that suppuration has taken place. Sometimes, in fatal cases, the kidney has been found converted into a bag of matter. If one of the kidneys remains sound, it may perform the functions of both, and comparatively little inconvenience may ensue; but in other cases, the kidneys may be unable to secrete the urine, and so to clear the blood of its acrimonious parts; death, therefore, must be the consequence.

Diagnosis. Some of the symptoms of inflammation resemble those of a stone in the kidney or bladder, which last affection is known by pain in the region of the kidney, which is not at first accompanied by fever; there is a numbness of the thigh and a drawing up of the testicle of the affected side, with almost constant sickness and vomiting. If the stone is too large to pass from the kidneys into the ureter, or if it sticks in any part of that passage, it may excite violent pain, and at length inflammation and suppuration. If it passes into the bladder, it will probably be the nucleus of a larger stone, and give rise to the long train of painful and dangerous symptoms of stone in the bladder. *See* STONE.

Treatment. We are to endeavour to remove inflammation of the kidney by bleeding, both from the system, and from the neighbourhood of the part, by cupping or by leeches; by purgatives chiefly of the saline kind, and by giving such diuretics as do not irritate the kidneys very much; such are the acetate of potash, given in the dose of twenty or

thirty grains twice a-day, adding to each dose half a drachm of squill vinegar, and the same quantity of spirit of nitrous ether, administering them in half a pint of infusion of quassia, and half a pint of cinnamon-water. Warm fomentations should be applied to the region of the kidneys, emollient clysters may likewise be thrown up, and, as a similar remedy, the warm bath may be employed. Perspiration may be induced by the various preparations of antimony. Blisters are improper, as the cantharides might be absorbed, and irritate the urinary passages.

KING'S EVIL. Scrofula was so called, from the superstitious notion, that it could be cured by the royal touch. Queen Anne seems to have been the last of our monarchs who endeavoured to impart a cure in this way; but that fancy prevailed so lately as the coronation of Louis XVI. and he is said, on that occasion, to have touched two thousand persons afflicted with that malady. *See* SCROFULA.

KING'S YELLOW is an impure sulphuret of arsenic, which is a good deal used in painting, and a favourite poison in this country for killing flies; hence it has often been the cause of fatal accidents; and has sometimes been used intentionally as a poison; producing the usual symptoms occasioned by arsenic.

We take this opportunity of mentioning that it is a mistake to believe that arsenic has an acrid taste when in the act of being swallowed. Dr. Christison has not been able to discover any actual case where this sensation was perceived; and says we may rest assured that it often makes no impression at all, as it has been swallowed unknowingly with articles of food. The mistake has probably arisen, from the impression in the act of swallowing having been confounded with the inflammation in the throat, subsequently developed along with the other inflammatory symptoms.

KINO. An astringent substance obtained from an African plant. It was long uncertain what plant furnished kino, but it is thought now to be proved, that it is the *Pterocarpus erinacea*. It is used to check diarrhœa, and for the other purposes for which astringents are employed, in the dose of twenty or thirty grains of the powder, or two drachms of the tincture. One part of powdered kino to four of alum forms a styptic powder, which in the dose of from ten to twenty grains twice a-day is recommended in menorrhagia and the whites.

KNEE-JOINT. This joint admits of flexion and extension; it is made up of the thigh bone, the large bone of the leg, and the knee-pan. It is surrounded by a large capsular ligament, in which a fluid is sometimes collected. There are two ligaments within the joint, which cross each other; these ligaments are stretched when the leg is extended, and relaxed when the leg is bent, allowing at this time a little lateral motion. Between the thigh bone and that of the leg are two semilunar cartilages, thick on their external edges, and thin at the centre; they alter their figure according to the situation of the bones, to make the shape of one correspond to that of the other.

KNEE-JOINT, *Loose Cartilages in.* Sometimes one or two pieces of cartilage, or of bone covered by cartilage, are found in the cavity of the knee-joint. They are generally flat and oblong, and have their edges rounded. They are commonly about the size of a horse-bean, often much smaller, and sometimes considerably larger; when very large, they do not give so much trouble to the patient as the smaller kind. From the irritation of these bodies, the fluid which lubricates the joint is secreted in greater quantity, the capsular ligament is distended, a degree of stiffness of the joint takes place, with more or less of external inflammation. Sometimes the symptoms are so mild as not to need an operation; but often, that is the only means of relief. Sometimes the operation succeeds; but in other cases, severe inflammation and lameness ensue. As the danger of inflammation to the joint is very great,

some have proposed to try a laced knee-cap, or a roller and compress, when the loose cartilage is so situated as not to occasion pain. In one case, this method was tried for ten years with complete success.

KNEE-JOINT, *White Swelling of.* This is a very formidable disease, to which joints, but more especially the knee-joint, are liable. It is called white swelling, from the circumstance of the colour of the skin not being altered, notwithstanding the increased size of the joint. It occurs most frequently in scrofulous constitutions. At the commencement of the disease, the swelling is inconsiderable, and there is merely a fulness at the depressions on each side of the knee pan, which gradually spreads over the joint. Pain soon begins, and increases till the patient is unable to bear the weight of the body on the diseased joint; he, therefore, gets into the habit of touching the ground only with his toes, keeping the knee-joint bent, so that it at last becomes incapable of being straightened. The joint in time, acquires a very great size, but the skin retains its natural colour, distinguished only by its shining appearance, and by the large veins running through it. As the disease advances, collections of matter form round the joint, and burst. Sometimes the ulcers heal, but more commonly, other collections succeed. The constitutional disturbance is now great. The health is impaired, the appetite and sleep are bad, the pulse is small and frequent, there is obstinate diarrhœa, and profuse night sweats. Death, in no long time, happens, unless some means be taken to free the constitution from all this disease and irritation.

Treatment. If the swelling should be seen by the surgeon when there is a degree of inflammation present, it is to be treated by topical bleeding, and cooling lotions, accompanied by the antiphlogistic regimen, and saline purgatives. Cupping is a very good way of abstracting blood in this state of the disease; but when the inflammation and tension are very great, probably thirty or forty leeches are preferable. These measures are to be considered as applicable only to the inflammatory condition of the joint; but when that state is not present, such practice has no beneficial tendency, and no influence on the principal disease. A method of discussing white swellings has been in many cases very successfully practised, viz. friction with the hand, using no other medium than dry flour. This is to be done with considerable force, and for one or two hours at a time. Another essential measure is to keep up a discharge from the surface of the joint by blisters or by issues. It is advisable to begin with a very large blister, completely enveloping the whole circumference of the joint; when the blister heals, the part is to be strongly rubbed with some stimulating liniment, three or four times a-day. If we prefer the employment of issues, one about the size of half-a-crown is to be made with caustic, on each side of the joint, and kept running by the application of stimulating ointments, as directed under the article ISSUE. Pressure also by adhesive plaster, and by oiled silk, has been recommended. During all our local treatment, much attention is to be directed to the constitutional symptoms, especially to the hectic fever, which is so commonly present. When the disorder of the constitution is so great as to threaten life, or to produce long and tedious ill health, it becomes necessary to amputate the limb; and the good effect of this operation is in many cases very wonderful. The irritation from the diseased joint is no sooner removed, than the constitution rallies; and the patient, who but lately seemed within a few days of his death, recovers his health completely, and has every prospect of a long life.

KNEE-PAN, called by anatomists *patella* or *rotula*, is the small flat bone situated at the fore-part of the joint of the knee. Its shape resembles the common figure of the heart, with its point downwards. The anterior convex surface of the rotula is pierced by a great number of

holes, into which fibres of the strong ligament that is spread over it enter. Behind, its surface is smooth, covered with cartilage, and divided by a middle convex ridge into two cavities, of which the external is largest; and both are exactly adapted to the pulley of the thigh bone, on which they are placed in the most ordinary unstraining postures of the leg; but when the leg is much bended, the rotula descends far down on the condyles; and when the leg is fully extended, the rotula rises higher in its upper part than the pulley of the thigh bone. The substance of the rotula is cellular, with very thin external firm plates; but then these cells are so small, and such a quantity of bone is employed in their formation, that scarce any bone of its bulk is so strong. Besides, it is covered all over with a thick ligament to connect its substance, and is moveable to one side or other; therefore it is sufficiently strong to resist the ordinary actions of the large muscles that are inserted into it, or any common external force applied to it; while a fixed process, such as the projection at the elbow, would not have been sufficient to bear the whole weight of our bodies, which frequently falls on it, and would have hindered the rotatory motion of the leg. Notwithstanding these precautions to preserve this bone from such injuries, yet I have seen a transverse fracture in it, when, by the report of the patient, and of the people about him, and by the want of swelling, discolouring, or other mark of bruise or contusion, it was plain the bone was broken by the violent straining effort of the muscles. Though my patient recovered the use of the joint of the knee, yet I think it reasonable to believe, that this sort of fracture is commonly attended with difficulty of motion after the broken parts of the rotula are reunited. (Dr. MONRO, *Primus.*)

L

LAB

LABOUR. The efforts of the womb, assisted by the abdominal muscles, to expel the fœtus and after-birth, when the child is able to live independently of the mother. The general period of labour is about nine calendar months, or from thirty-nine to forty weeks, or from 273 to 280 days, after conception. Occasionally labour may be a little sooner, and at other times, a little later, than the abovementioned period. The time at which labour may be expected, is reckoned either from the time that the monthly discharge has been obstructed, or from the period of quickening. If the reckoning be taken from the obstruction, it should be from a fortnight after the last appearance of the discharge; and if from the period of quickening, five months from that may be allowed for the time of labour

LAB

The process of labour is far from being uniform in every instance; and from this circumstance, writers on Midwifery have distinguished different classes of labours, of which the principal are, natural, laborious, preternatural, and complex. As child-bearing is a function co-extensive with the species, it might be thought improper and unnecessary either to describe it with such variety and minuteness, or to interfere at all with the process; but experience shows that it is a subject demanding the most careful and discriminating investigation; and that on a proper management of women during labour, depends the future comfort and health, or even the life, of themselves and their offspring.

I. NATURAL LABOUR is that which takes place at the full time, the head of the child

presenting properly, the pains being regular and effective, the whole process being completed within twenty-four hours. Labour consists of three stages; in the first, the mouth of the womb and the passages are opened and prepared; in the second, the child is expelled from the body and separated; and in the third, the after-birth and membranes are excluded.

1. *First Stage.* The approach of labour is indicated by pain in the back and loins, occurring at irregular intervals, and giving many teasing and disagreeable sensations. When these have continued for some time, a discharge of slimy matter, tinged with blood, occurs, which is commonly known by the name of the *shows*. After a number of hours, more or fewer in different cases, the uneasiness becomes considerable; there are alternate hot and cold fits; there is a desire to pass water, and the patient is restless and uncomfortable. The pains now increase in regularity and force, returning every ten or twelve minutes, and leaving the woman comparatively easy in the intervals. In many cases, the woman is troubled for some time, even for days, with ineffective pains, resembling those of labour, before the true pains commence. These false pains are occasioned by the pressure of the enlarged womb on the neighbouring parts: they occur mostly towards the evening, and during the night; they are slight and irregular; they are not attended by shows, and they are generally mitigated by a change of posture. If they are occasioned by costiveness, this must be removed by laxative medicines. When the pains occur every five or six minutes, and the opening of the mouth of the womb is pretty well advanced, the bag containing the child, with a little portion of the waters, is pushed forward, and this contributes in a gentle and easy manner to complete the opening, and to enlarge the parts sufficiently to admit the progress of the child's head. After the passages are prepared, the membranous bag bursts, the waters are discharged, and the pains commonly increase in violence. Sometimes the membranes burst when the womb is very little opened, and the water drains slowly off for one or two days; occasioning what is often called in the lying-in room, a *dry labour*. In favourable cases, this first stage is completed within twelve or fourteen hours from the time it fairly begins.

2. *Second Stage.* In the second stage, the infant is expelled. The pains now are somewhat different; they are felt lower down, they continue longer, and are attended with a straining and bearing down. The pulse becomes quicker, the patient feels hot, and often a strong perspiration breaks out. The head comes down and stretches the parts, till at length it is expelled, with very severe pain, which commonly ceases immediately afterwards. But it very soon returns, and the rest of the body is pushed forward, the proper turns being made during the whole process, so as to bring the broadest parts of the child to pass through the widest parts of the mother. The pressure made upon the head of the child by the contractions of the womb, deprive it for the time of sensibility, so that it does not disturb the mother by any struggles of its own. In general the pains succeed each other very rapidly in this stage, and their force is so great, as to complete the delivery in a period from a few minutes to half an hour. But various causes to be afterwards noticed, sometimes render this stage a great deal longer.

3. *Third Stage.* There now only remains the after-birth with the continuous membranes, to be thrown off; which contitutes the third stage of labour. Some time after the child is born, the patient rests a little, but by and bye she feels pains, not quite so severe, but rather what may be termed *grinding*. These are occasioned by the contractions of the womb, by which the after-birth is expelled, the cavity of the womb greatly diminished, and the large blood-vessels by which the placenta was attached, are closed. The non-performance of this contraction gives occasion to dangerous floodings. If the

after-birth is not thrown off within an hour, some assistance will be required.

Having briefly stated some of the more common circumstances of natural and easy labour, we shall mention a few variations which sometimes occur. The alternate flushes of heat and sensations of cold are sometimes so strong, as to shake the body violently, and even the bed; they do not indicate any thing very bad. Vomiting is another occurrence, which, when it happens alone, need not give any disquietude. Anxiety and fretfulness sometimes seize the patient's mind during the first stage, but these are to be dispelled by encouraging language and sympathizing attentions.

Labour, *Management of.* There are various particulars to be avoided, and several things to be done, in the management of women during labour. The good sense of modern accoucheurs has swept away a great deal of useless and pernicious practices, which really make it wonderful that so many women got over the process with safety. The crowds of gossips talking or regaling themselves in the patient's room, one group succeeding as another retires, the cordials and stimulants poured into the patient, are now scarcely tolerated amongst the lowest vulgar. A cheerful and prudent friend, with the practitioner and nurse, are all the persons proper to be in the room; a greater number only exhausts the woman's strength, and heats and contaminates the air of the apartment. When the practitioner is called, if the pains are pretty frequent and regular, an examination should be made to ascertain the progress, but it should not be repeated frequently and unnecessarily. The woman need not be confined to one posture, but she should not use violent agitations of the body, nor bear down much in the early stage. No method should be tried to increase the force of the pains, as it is much better for the passages to be gradually enlarged. When the bowels are known to be loaded, an injection is very proper, and the urine should be regularly passed. The bed is to be so prepared, that the moisture from the waters and other discharges, may not add to the discomfort of the woman. The mattress is placed uppermost, and a dressed skin or oiled cloth, or folded blanket, is to be placed on that part on which the body of the woman is to rest. A clean sheet should be laid on in the usual way, and another in the form of a roller, across the bed, having the ends folded in at the sides. A coarse blanket folded within a sheet ought to be laid immediately beneath the patient. This is to absorb the moisture, and is to be removed after delivery. The rest of the bed-clothes are to be put on in the ordinary way; but it is convenient to have the edge of the sheet at the side of the bed to which the patient's back is to be placed, pinned or sewed over the blanket and bed cover. The woman is to be on her left side, and the practitioner behind her. The bed ought to be placed in such a situation, that the room may be properly aired, without the patient being exposed to a current of air; at a little distance from the wall, when it can be done. The bed-curtains should be of cotton or linen, and never drawn so close as to prevent the free circulation of air. The dress of women in labour should be light and simple, both to keep themselves from being overheated, and to prevent any thing from being in the way of what assistance is necessary. The patient should be put to bed when the first stage is nearly completed; the best posture is lying on the left side, and a pillow or small bundle is to be put between the knees. The bearing down pains should be those of the womb alone, and should not receive any assistance from the voluntary efforts or forcing of the mother; as these violent exertions are apt both to injure the passages, and to wear out her strength. At the last pains, when the desire to force down is almost irresistible, the utmost attention on the part of the practitioner is necessary, to prevent laceration of the parts. The patient may

be allowed to rest a little after the head is expelled, and the body of the child should not be hastily drawn forth. In some cases, this may be necessary when the child seems livid and in danger of injury, or when the cord is twisted round its neck. When the child cries stoutly, the navel-string is to be tied at two parts, and separated by cutting between them. The child may then be lifted from the mother, and the proper attentions paid to it. The after-birth is not to be taken away till the pains return in a slight degree to effect this; all rash or strong pulling is attended with the greatest danger. Neither should the woman use much exertion by straining, coughing, or the like, to hasten the throwing off of the after-birth. The belly may be gently rubbed with the hand. When no untoward symptoms take place, we may rest from a quarter to three quarters of an hour; but may occasionally, by *gently* pulling at the cord, try if the after-birth is disengaged. When more than an hour elapses, the assistance of a proper practitioner will be required; and at any time, if flooding takes place, assistance will be instantly necessary.

II. Laborious Labours. We now proceed to mention some cases, in which matters do not go on so favourably as above detailed. The labour may be more tedious or difficult than usual, from various causes. The pains may be less effective from weakness of the system, but more frequently from weakness of the womb itself. Sometimes, though less effective, they are severe enough; but generally they are slighter than proper pains, and come seldomer. Sometimes this inefficient contraction is owing to the waters coming away too soon, or the womb being over distended, as by twins, or too great quantity of water; or it may be owing to debility, induced by fear or other depressing passions, or general weakness. This is a state of suffering and anxiety, and requires patience and fortitude on the part of the patient, and tenderness and prudence on the part of the assistants. No measures must be taken for forcing matters, no stimulants, nor strong purgatives, nor vomits, as was too much the case in times of ignorance, not very remote. Tranquillity of mind and body are to be enjoined, a little mild nourishment and drink may be allowed, and a saline clyster is often of service. When the pains are prevented from doing their office, by rigidity of the mouth of the uterus, accompanied by fulness of pulse, with heat of skin, thirst, and restlessness, drawing blood from the arm is often of very signal benefit. In cases of exhaustion and weakness, it must be obvious that bleeding would be quite improper, and that we are rather to give something cordial and stimulant, as a little wine and water. If the rigidity of the membranes be the cause of the delay, it is proper to break them, though in usual cases this should not be done. The circumstances above detailed are those which render the labour tedious chiefly in its first stage, and at this period it is not necessary to confine the woman to any particular posture; she may sit or lie as she feels most easy, and if she has any inclination for food, a little may be allowed. The urine should be regularly evacuated.

If the labour is tedious in the second stage, it is generally owing to the state of the external parts, or to a disproportion between the size of the child's head and the passages. In those women who are advanced in life before they have children, the parts often yield with difficulty. A wrong shape of the bones may occasion resistance, or diseases within the parts, or uncommon size of the child's head, or swelling of it from water distending the brain and its coverings.

When there is long protracted pressure of the head on the soft parts, much suffering and danger may ensue. As it is of the most essential moment to have assistance in time, we subjoin some of the symptoms which indicate danger. Great tenderness and swelling of the belly, hurried breathing, inability to make water, great tightness within the haunch-bones,

thirst, quick pulse, and other feverish symptoms, great restlessness, headach, and a degree of wandering of the mind; such symptoms warn us that the powers of nature are not to be depended on, and that nothing but immediate delivery can save the life of the woman. The method of doing this must be left to the judgment of the prudent and skilful practitioner. There are certain instruments which, in proper hands, are fitted to accomplish the delivery without injury to the child, and with hardly any additional suffering to the mother; though no practitioner of education and experience will rashly or unnecessarily use them. Indeed, in several cases it requires great firmness on his part, to resist the importunity of some women to be delivered by instruments, who have either in their own case formerly, or in those of others, been satisfied of their utility and safety, and who are impatient to have their sufferings terminated.

III. Preternatural Labours, or cross-births, are those in which some other part of the child than the head presents. We cannot, in general, assign any reason for such occurrences, nor can the woman, by any sensation of her own, be assured that the presentation is unusual. Apprehensions of this kind should not be indulged in. If the feet or the breech present, the delivery is to be accomplished by properly accommodating the turns of the child to the capacity of the pelvis, but no force should ever be employed; and though there is always some risk to the life of the infant, there is none to the mother. If the arm, shoulder, or sides of the child present, the delivery is impossible until the infant be turned, and the feet brought down into the passage. This is an operation which may be done with comparative ease and safety, if the wrong position of the infant be discovered before the waters are off; but otherwise, both mother and child are in considerable danger. The womb being closely contracted round the body of the infant when the water is drained away, and being soft and spongy in its texture, is liable to be torn if much force be employed; and then, either the child may escape into the cavity of the belly, or if it be extracted by the feet, blood may be effused from the womb into that cavity, and such injury be done as to prove fatal. Women too frequently add to the danger of the operation of turning, by their restlessness and impatience. They should remember how much is at stake, and exert all their fortitude so as not to embarrass the practitioner.

IV. Complex Labours. *Twin Cases.* There are no symptoms during pregnancy, by which it can be certain that a woman has conceived two or more children. This is put beyond doubt only after the birth of one. If there is a second child, the womb does not appear to be diminished in size, as it does in cases where there is only one. The birth of one child is not prevented in general by the interference of another, though this sometimes happens. Each infant is contained within a distinct sac; but as the head of one infant is generally opposed to the breech of the other, one of them most commonly is a cross-birth. It often happens that twins are small, and the delivery is thus rendered more easy. Twin cases, however, always require much attention, both for the sake of the infants, and because the recovery of the mother is more uncertain than in the cases of single children. The second child is usually delivered soon after the first; but if there be a long cessation of the pains after the first, there is considerable danger. The patient may be allowed to rest a little; but the practitioner should extract the second child before the passages become contracted, or the after-birth of the first-born be separated. As a general rule, we may say, that not more than an hour should be suffered to elapse between the birth of the first and second child. We must guard against the flooding which is apt to occur in such cases; and give very little disturbance to the woman in binding up the belly. The first-born child should be marked. When

there are more than two children, they seldom all live.

Falling down of the Navel-String.—If the cord be pressed upon for a very short time, the consequence will be the death of the infant. It is not a common occurrence, but it may happen if the cord be uncommonly long, or if the infant be in a cross position. It happens sometimes from mismanagement, when the waters break before the passages are properly prepared. If the cord be felt through the membranes before they break, the woman should be kept very quiet, and as much as possible in one posture, till the womb be fully opened; at which time it is possible, by turning, to save the infant's life. But when the coming down of the cord has been owing to the too early evacuation of the waters, the life of the infant is to be considered as in great danger; and any attempts to save it, by turning, would be attended with more risk to the mother than it would be justifiable to incur.

For other circumstances of labour, of a more unusual and dangerous kind, and for the management of women after the whole process is completed, *see* Cæsarian Operation, Flooding, After-birth, Abortion, Delivery, &c.

LACRYMAL GLAND. A gland situated at the upper portion of the orbit of the eye, for the purpose of secreting the tears. Its functions are increased by any thing irritating the ball of the eye, and also by mental emotions, as grief or joy.

LACTEALS. A set of vessels which convey a milky fluid, whence they derive their name. They arise from the cavity of the intestines, from minute beginnings which elude the eye. The milky fluid which they carry is the chyle, elaborated from the food after it has passed the stomach, and has been mixed in the duodenum with the bile and pancreatic fluid. The lacteals charged with chyle pass through the glands of the mesentery, where some change is probably made upon it; thence it is conveyed by the lacteals into the receptacle of the chyle, then to the thoracic duct, by which it is carried to the left subclavian vein, to be afterwards incorporated with the blood in the lungs.

LACTUCA *and* LACTUCARIUM. *See* Lettuce.

LARYNX. The upper part of the wind-pipe, on which an operation called laryngotomy is sometimes necessary, to enable the patient to perform the function of breathing, when the upper part of the passage is obstructed; or for the extraction of foreign bodies, which have gone down the wrong passage, as beans, buttons, pieces of glass, &c. *See* Bronchotomy.

LATERITIOUS SEDIMENT. The sediment resembling brick-dust, which sometimes occurs in the urine of patients labouring under certain diseases, principally feverish ailments. It is considered as a certain mark of a salutary termination of a gouty paroxysm.

LAUDANUM. The tincture of opium, so called in the jargon of Paracelsus, from its soothing and praiseworthy qualities. It is one of the best and most manageable forms of administering opium, whose narcotic and other virtues render it so essential in the practice of physic. Under the article Opium, is a very full account of the source from whence it is derived, of its various preparations, of their effects, and the cases in which they are useful; and it will therefore be necessary to do little more in this place, than to state the doses of laudanum proper to be given on various occasions, and the methods to be pursued when an overdose has been swallowed.

Laudanum, *Uses and Doses of.* When we wish to procure sleep, the dose for a grown up person is from twenty-five to forty drops, taken in a little water, either plain, or sweetened, or in peppermint-water, cinnamon-water, gruel, or the like. To allay griping pains in the bowels, from fifteen to twenty drops; but not repeated above once, or at the most twice, at an interval of half an hour. When there is a harassing, tickling cough, and no in-

flammatory symptoms forbid its use, ten or twelve drops may be very cautiously given, and repeated after an hour or two, till the second or third time.

It is to be most particularly noticed, that although we consider it as right that every person, especially those who have the care of families, should know the doses of laudanum which are proper on various occasions, we would urge most strongly, that it should never be given except in cases of absolute necessity; and if possible, always under the sanction of a medical man; and we would caution parents never to allow it a place in the nursery; nor to put it in the way of servants or others, whose ignorance or rashness might render it productive of the most baneful effects.

LAUDANUM, *Treatment of those who have swallowed an Overdose of.* "The primary object," says Dr. Christison, "is to remove the poison from the stomach. This is proper, even in the rare cases in which vomiting takes place spontaneously. The removal of the poison is to be accomplished in one of three ways, by emetics administered in the usual way, by the stomach-pump, or by the injection of emetics into the veins. By far the best emetic is the sulphate of zinc in the dose of half a drachm or two scruples, which may be repeated after a short interval, if the first dose fails to act. In order to insure its action, it is of great use to keep the patient roused as much as possible—a point which is often forgotten. The sulphate of copper is by no means so certain as the sulphate of zinc. Besides, as it is a much more virulent poison, it may prove injurious if retained too long in the stomach. Tartar emetic, from the uncertainty of its action when given in considerable doses, is even worse adapted for such cases. Emetics should be preferred for removing the poison from the stomach, provided the case be not urgent. Even then, however, they sometimes fail altogether. The best practice in that case, is to endeavour to remove the poison with the stomach-pump; and this, in urgent cases, should be the first remedy employed.

"The last method for removing opium from the stomach, is a desperate one. It is the injection of an emetic into the veins. Tartar emetic answers best for this purpose, and its effect is almost certain. A grain is the dose. While injecting it, care must be taken by the operator not to introduce air into the vein.

"The next object in conducting the treatment of poisoning with opium, is to keep the patient constantly roused. This alone is sufficient when the dose is not very large, and the poison has been discharged by vomiting; and in every case it forms, next to the evacuation of the stomach, the most important part of the treatment. The best method of keeping the patient roused is to drag him up and down between two men, who must be cautioned against yielding to his importunate intreaties and occasional struggles to get free and rest himself. The duration of the exercise should vary according to circumstances, from three or six to twelve hours. When he is allowed at length to take out his sleep, the attendants must ascertain that it is safe to do so by rousing him from time to time; and if this should become difficult, he must be turned out of bed again, and exercised as before.

"When the opium has been completely removed, the vegetable acids and infusion of coffee have been found useful in reviving the patient, and subsequently in subduing sickness, vomiting, and headach." (Dr. CHRISTISON *on Poisons.*)

LAUROCERASUS. The leaves of the cherry-laurel, *Prunus laurocerasus*, have a flavour resembling that of bitter almonds or other kernels; and from this circumstance, an infusion of the leaves has been employed to give flavour to custards, puddings, and other articles for the table. But as it is undoubted that the cherry-laurel has poisonous qualities, such dangerous seasoning should never be used. One woman who had lost her life by drinking of laurel-water, thinking it

to be a cordial, in a quarter of an hour after drinking two-thirds of two ounces, complained of a violent disorder in her stomach, soon after lost her speech, and died in about an hour, without vomiting or purging, or any convulsion. By experiments on brute animals, it appears that this poison is destructive to life, not only when taken into the stomach, but also on being injected into the intestines, or applied externally to different organs of the body. The discoveries of modern chemistry render it probable, that the destructive properties of cherry-laurel water are owing to its containing prussic acid. And after the well authenticated proofs of its deleterious effects, it is to be hoped that it will never find a place in the arrangements of housewifery. *See* PRUSSIC ACID.

LAVENDER, *Lavandula spica.* A fragrant plant from which an essential oil is distilled, but it is to be regarded rather as a perfume than as a medicine; what medicinal virtues it has are of a stimulant nature. The compound spirit of lavender is principally used to give colour and flavour to other medicines of a more active nature.

LAXATIVES, are those medicines which promote a discharge from the bowels with considerable ease, without very copious discharge or pain during their operation, and without any general excitement of the system. They may be said simply to empty the bowels, and to carry off superfluous matter, which is already out of the course of the circulation. Most purging medicines may be so diminished in their dose, and modified in their form of being administered and combined, as to act merely as laxatives; but there are others which, in as considerable a bulk as it is convenient to take them, do little more than procure easy stools. Such are, sulphur, alone or combined with cream of tartar; manna, castor oil; Rochelle, and some other neutral salts.

LEAD. Like other metals, lead must be oxidized or combined with an acid, before it exerts any action on the body. When the salts of lead are introduced into the system, their effects are of a very singular and injurious nature, occasioning the severe and painful affection of the bowels called Colica Pictonum or Devonshire colic. There are a variety of ways in which lead may be introduced into the body, so as to be injurious, viz. by a person being exposed to the fumes of lead in the various operations performed on that metal; by rum or other spirituous liquors being drank, that have passed through stills with leaden worms; and in some cases, though we should hope rarely, by sugar of lead being employed to adulterate wine. The disease induced by the poison of lead is characterised by griping, costiveness, sickness, and a wasting of the muscles of the thumbs, and of the calf of the leg. These symptoms, and the mode of treating them, are fully detailed under the article DRY BELLY-ACHE. Though lead is therefore sparingly used internally, it is an excellent and useful refrigerant when applied externally, as in the form of Goulard's extract, or the solution of sugar of lead. This last preparation has even been used internally; and, in the hopeless diarrhœa of consumption, it seems, when combined with opium, in the proportion of two grains of sugar of lead to one of opium, to check it a little, though it cannot cure it.

LEAMINGTON PRIORS, in Warwickshire, has various springs both of a saline and sulphureous nature. The same observances with respect to preparation and management are proper here, as with the waters of Cheltenham and Harrowgate.

LEECH, *Hirudo medicinalis.* A well known species of worm that lives in water, and is applied to various parts of the body to draw blood for the cure of disease.

There is only one species of leech used in medicine. It has a flat and slimy body, composed of rings, tapering towards the head; it is commonly about two inches long, about the thickness of a goose quill, but it can lengthen and shorten itself

very much. The bite of those leeches which are found in stagnant waters and marshes is said to cause pain and inflammation; such leeches, therefore, as well as the horse-leech, are not used, and those are preferred which are taken in the summer season, in waters having a clear sandy bottom. A leech attaches itself to any substance to which it wishes to fix, by an apparatus constructed on the principle of a leather-sucker, which it has at both ends; the one at the head being like a horse-shoe, with a triangular mouth in the centre, and that at the other end being circular. When they fix on the body, they inflict a small wound of three little flaps, from which they suck blood until they are gorged, or till they are forced to quit their hold; this is best done by sprinkling on them a little salt.

The cases are very numerous in which leeches are useful; and in children, where it is so difficult to get blood from a vein, leeches furnish an excellent resource. Leeches are useful in the various inflammatory diseases, as ophthalmia, sore throat, rheumatism, toothach, inflammation of the bowels and uterus; in measles and scarlet fever, in chincough, in headach, in bruises, and in piles.

It is sometimes difficult to get leeches to fix; they should be kept hungry and taken out of the water for some minutes before they are to be used, and should be dried with a soft cloth immediately before they are applied. The part should be well washed with soap and water, then with milk and water, and wetted with blood or syrup, and if there be many strong hairs they should be shaved off. A large leech will draw about an ounce of blood, that is about a table-spoonful; and when they come off, the bleeding may be encouraged to a considerably greater extent, by bathing the parts with warm water, or by applying large poultices of bread and milk, or applying cupping glasses. It is sometimes difficult to stop the bleeding, and the surgeon is sent for in great alarm, especially when leeches have been applied to young children. The bleeding may generally be stopt by proper pressure with a little lint or similar downy substance for a due length of time, though this is sometimes very difficult when there is no bone to press against; touching the wound with lunar caustic will almost certainly succeed; but we must take care that the flowing blood do not wash the caustic down about the neighbouring parts. Sometimes the wounds made by leeches give rise to a good deal of pain, swelling, and extensive inflammation. The best application is a cooling lotion of Goulard's Extract, or diluted spirits and water, or vinegar and water. If the pain and tension continue long, an emollient poultice of bread and milk will be useful.

"Salt has been thrown on the animal to make it disgorge the blood which it has sucked, but the leech is generally killed in the experiment. A more easy way to discharge the blood and save the animal is to hold it in the hand and gently squeeze it in a napkin from the head downward; the blood flows copiously from what may appear the anus, or through the ruptured extremity of the intestinal canal, and the worm is not essentially injured."—Dr. Parr.

Leeches are best kept in a bottle half filled with pure spring or river water, covered with gauze or fine muslin. It is better not to put bran or any other substance into the water, but to change it pretty frequently. Leeches are said to be very sensible to the electrical changes of the atmosphere.

LEEK, *Allium porrum.* A savoury vegetable of the garlic kind, excellent for healthy stomachs, but apt to disagree with such as are dyspeptic.

LEGUMEN. The Latin name for pulse, as pease, beans, &c.

LEMON, *Citrus medica.* A fruit growing in warm climates, possessed of the most grateful acidity, and of the most admirable virtues in sea-scurvy. This fruit furnishes a very cooling acid drink in fevers; and its juice, when preserved, is one of the most pleasant and infallible

guardians of the health of seamen during long voyages. Its powers in this respect render it one of the most important articles of provision for ships which are going on distant expeditions. It is an excellent corrector of the acrimony necessarily engendered by the use of salt provisions, and may be given to the extent of an ounce, with the daily allowance of water or spirits issued to the crew. As lemon-juice is an excellent preventer of sea-scurvy, so it is the certain cure of it, unless the disorder be very long and inveterate, or the health and strength of the constitution quite gone. Another very important application of lemon-juice in the practice of physic is in the formation of effervescing draughts, which are of excellent use in the sickness at stomach attendant on many feverish diseases, and also in promoting a gentle perspiration. *See* EFFERVESCING DRAUGHTS.

LENITIVE ELECTUARY, an electuary composed of senna, prunes, and tamarinds, which acts as a gentle laxative, when taken in the bulk of a nutmeg or a dessert-spoonful.

LENS. The clear convex substance behind the pupil of the eye, which, in conjunction with the other humours, refracts the rays of light in order to form a picture on the retina at the bottom of the eye. It is inclosed in a capsule or membrane; and a thickening or opacity either of the lens or its capsule is the occasion of the disease of vision called a cataract. *See* EYE, *and its Diseases.*

LENTIL, *Ervum Lens.* A kind of pulse used to give flavour to soup.

LEPROSY. The term leprosy is in familiar use, from the celebrated disease of that name occurring among the Jews, the various symptoms of which are so minutely detailed in Scripture, as well as the strict and severe regulations under which those were placed who were afflicted with it. Probably it is from this circumstance, that in common language we hear the very frequent mention of leprosy and leper, as applied to any extensive and disgusting eruption on the skin; though there is every reason to consider the Jewish leprosy as quite unknown in this country.

In the more accurate nomenclature of cutaneous diseases, introduced by Willan and Bateman, the terms *lepra* and *leprosy* are meant strictly to apply to diseases of the skin characterised by scaly patches of different sizes, but having always nearly a circular form. Of leprosy thus defined, there are different kinds. The ordinary form of the disease in this country commences with small, round, reddish, and shining elevations of the skin, at first smooth, but within a day or two exhibiting thin scales on their tops. These, says Dr. Bateman, gradually, sometimes rapidly, dilate to the size of half-a-crown, still retaining their oval or circular form, and are covered with shining scales, and encircled by a dry, red, and slightly elevated border. In some cases, these scales accumulate, so as to form thick prominent crusts. If the scales or crusts are removed, the skin appears red and shining, being very smooth, and free from the cuticular lines in the beginning; but marked, in the advanced stage, with long deep lines and reticulations, not always coinciding with those of the adjoining surface. The lepra commonly begins below the elbow and knee, and extends to other parts of the body, but happily the face is seldom the seat of large patches. When the disease is moderate in degree and extent, it has merely a slight itching when the patient is heated by exercise, or by the warmth of bed; and in moist weather it has a slight tingling sensation. When it is more extended, and has a considerable degree of inflammation of the skin, there is great pain and stiffness of the joints; but all this suffering and uneasiness lasts sometimes for years, without the production of much constitutional derangement.

Causes. The causes of this disease are various, and not easily ascertained; it is not contagious; it is produced occasionally by some articles of food and drink, having effects on certain indivi-

duals which they have not on other people. Some have attributed it to cold and moisture, and a neglect of cleanliness; but it occurs in the better ranks of life, among persons who are very attentive to personal cleanliness.

Treatment. The insignificant remedies which have been recommended for the cure of leprosy are very numerous, probably arising from the circumstance, that there is no single application or plan of treatment that will be uniformly successful, even where we are attentive to the nature of the disease, and the circumstances of each case; but where we merely take up the name, and indiscriminately apply to every case we call leprosy, some one medicine or plan, we may be certain of being repeatedly altogether disappointed. In the milder and less irritable form of leprosy, the diet should be light and moderate, and all heating liquors should be avoided, especially malt liquors and spirits. The warm bath, with moderate friction, removes the scales, and softens the skin. The sulphur waters of Harrowgate and other springs, used both internally and externally, are of service; and also the warm sea-water bath. But if the scales are gathered into thick crusts, and adhere firmly, we are to employ some active stimulating lotion, as diluted alcohol, or sulphuretted potash, or diluted aqua potassæ, or muriatic acid. When we have succeeded in removing the scales, we are to apply the pitch ointment, or diluted citrine ointment. These ointments should be applied at night, and washed off in the morning with soap and water. Pitch pills, and the preparations of iron may be given internally. A medicine, which some think of great service in lepra, is the decoction of the *solanum dulcamara*, the bitter-sweet, or woody nightshade, given in doses of two or three ounces three times a-day. It is to be carefully remembered, that the fretful inflammatory kind of lepra is always injured by any lotions or external applications except the very mildest; and in such cases, tepid water, or decoction of bran, or thin gruel, should alone be used: and where the heat, pain and itching are very troublesome, the parts are to be gently besmeared with cream, or a little fresh lard, or butter.

We have been thus particular in giving an account of the symptoms and cure of leprosy, as the skin diseases which we understand by that name, are those which the common people denominate *scurvy;* and under that name, they include almost every disease of the skin, even those of the most different appearance and character. But the term scurvy should be appropriated to that disease which arises in circumstances similar to those of long voyages, viz. where there is a long continued use of salt provisions, without a due proportion of vegetable aliment; where there is exposure to cold and moisture, and where the depressing passions are frequently exercised. But of late years, more attention has been paid by physicians to distinguishing the varieties of skin disease, and in giving the different species appropriate names; and we trust that in time, the people also will observe and speak with greater accuracy.

LETHARGY. In the more accurate language of modern physicians, lethargy is seldom used as the name of a distinct disease, but the deep sleep and insensibility which occur as a symptom of apoplexy, are what is meant by the term *lethargy*. *See* APOPLEXY.

LETTUCE, *Lactuca sativa*. A plant whose leaves are generally eaten with other herbs, in the form of a salad, dressed with oil and vinegar. Lettuce contains a narcotic principle; and those who use it with a view to procure sleep, should not use vinegar with it, as vinegar counteracts its soporific power. Lettuce has lately been brought into notice as an article of the materia medica, by its affording an extract having some of the properties of opium, and capable, in some cases, of being substituted for it. This extract is called *lactucarium* or lettuce-opium, and its dose is from three to five grains, and of the tincture from fifty to eighty drops. It is

thought to have the anodyne, without the constipating, effects of opium.

LEUCOMA. A white opacity of the cornea of the eye, the result of severe acute ophthalmia, impeding vision, and not admitting of a cure. The existence of this and other diseases of the eye, furnishes a strong reason for paying the most early and scrupulous attention to all ailments of that organ, where the mischief is so rapid, and often incurable. *See* EYE *and its Diseases.*

LEUCOPHLEGMASIA. An old term for the pale bloated habit, indicative of a dropsical tendency.

LEVIGATION. The act of pounding substances, or reducing them to a fine powder.

LICHEN. The name of a genus of plants of the class cryptogamia; familiar to the sight, by at least one species of it forming the green or grey covering of old walls or ruins. There is one species called the *Lichen Islandicus*, which has obtained some reputation as a remedy in consumptions, coughs, dysenteries, and diarrhœas. It is principally at Vienna that these good effects have been celebrated; but the article has been admitted into the London Pharmacopœia. It consists of a bitter matter, and a kind of mucilage, by which it acts as a tonic and an article of nutrition; but it has no title to any estimation as being a remedy in consumption. The form in which it is used is the decoction, to the extent of one or two ounces; the bitter part being first extracted by steeping it in warm water.

LICHEN is the name of a disease of the skin, thus defined by Dr. Willan: "An extensive eruption of pimples, affecting adults, connected with internal disorder, usually terminating in scurf, recurrent, not contagious." There are several varieties of this eruption, not very easy to distinguish or describe; but in general, little medicinal treatment is necessary for the milder kinds. It is sufficient that patients avoid heating themselves by much exercise, or by stimulants, and that they take a light diet, with diluent drinks, and a gentle laxative occasionally. All strong external applications are improper, especially preparations of mercury and sulphur, which produce severe irritation. Lotions of lime-water, or a weak solution of the acetate of ammonia, afford relief. The *prickly heat* of tropical climates is a species of lichen. This consists of a small red rash, chiefly upon such parts of the skin as are covered. It scarcely appears to the eye to be raised above the skin, though it gives a slight roughness to the feel. It is attended with a disagreeable sensation of heat and prickling in the skin, as is well expressed by its name. Some are troubled with it all the year round, others only during the warmer months. Such as have fair and delicate complexions, are more subject to it than others, insomuch that they are not free from it at times, either night or day. Some are incommoded by it only when exposed to the heat of the sun, or on making bodily exertions. When a cold fluid is drank, there is a sensation as of innumerable needles running into the skin. No medicine is required, and its troublesome effects are best remedied by quiet and rest.

LIGAMENTS. Strong, tendinous, inelastic, glistening bodies, which surround the joints, and connect bones together, or strengthen the attachments of various organs, or keep them in their places. Every joint is surrounded by a capsular ligament; the tendons at the wrist and ankle are bound down by what are called the annular ligaments; and we shall afterwards mention the ligaments of the liver. Poupart's ligament, under which the great nerves, artery, and vein pass out from the cavity of the abdomen to the fore part of the inferior extremity, is merely the lower border of the descending oblique muscle of the belly; which tendon is stretched from the fore part of the haunch-bone to the share-bone. In dislocations of joints the capsular ligament is often broken.

LIGHTNING. When persons are struck by lightning, the effects produced

are commonly those of high excitement, sometimes so great as to extinguish life instantaneously; at other times to produce mortification, apoplexy, or epilepsy. Such cases are to be treated in the usual way. "With regard to personal security in time of a thunder-storm, if a person be in a house which is not furnished with a conductor, it is advisable not to stand near any metallic articles, viz. near gilt frames, chimney-grates, bell-wires, iron casements, and the like. In the middle of a room, upon a dry chair, or table, or mattresses, or other insulating articles, is the safest situation. Should a storm happen when a person is in the open fields, and far from any building, the best thing he can do is to retire within a small distance of the highest tree or trees he can get at; he must not, however, go quite near them, but he should stop at about fifteen or twenty feet from their outermost branches: for if the lightning happen to strike about the place, it will in all probability strike the trees in preference to any other much lower object; and if a tree happen to be split, the person will be safe enough at that distance from it." (CAVALLO'S *Natural Philosophy.*)

LIME. A substance greatly abounding in nature, but generally found in combination with some other substances. Chalk, or lime-stone, is lime combined with carbonic acid; and when this acid is expelled by heat, the lime is left in the state of what is called quick lime. This is possessed of acrid, alkaline properties, having a harsh taste, and acting as an escharotic. Lime was the active ingredient of Mrs. Stephens's remedy for the stone, the secret of which was purchased by Parliament for £5000. It was made into pills with soap.

LIME-WATER. Lime is soluble in water, though it takes a great quantity to dissolve it, and this solution is called lime-water, and has been a good deal employed in the cure of diseases. It has been used in various symptoms of indigestion, as acidity combined with looseness, and in calculous complaints. The quantity may be from a pint to two pints daily. In the complaints of infants connected with disordered bowels, lime-water mixed with an equal quantity of milk may be given in doses of a tea-spoonful three or four times a-day. Lime-water has great effect in dissolving the slimy mucus with which disordered bowels are infested. It is on this principle that it has been used against the stone, with the view of dissolving the animal mucus which cements the parts of the concretion together.

LIME, a fruit. *See* LEMON.

LINIMENT, an oily or spirituous preparation for external use, of a consistence not so thick as an ointment. There are various useful liniments employed in medicine; the volatile liniment, of various strength, made of ammonia and oil, and applied very beneficially in sore throats, and other cases where an external stimulus is required; and the carron oil, a liniment of great efficacy in burns and scalds, made of olive-oil and lime-water equal parts. The tincture of soap, alone or with opium, is called anodyne liniment or opodeldoc, and is used to rub parts of the body affected with rheumatic or other pains. Stimulant liniments are useful in chronic diseases of the viscera, both by their own powers exciting the skin to action, and by relieving the internal parts; and also by the friction itself.

LINSEED. The seeds of the *Linum usitatissimum*, or common flax, when infused, yield a very useful mucilaginous drink, known by the name of linseed-tea; and of great use, when mild diluents are wanted. It is useful in disorders of the urinary bladder, in dysentery, in colic, and similar affections. Linseed meal forms an excellent emollient poultice.

LINT. In surgical language means the soft spongy substance with downy surface, applied to sores and ulcers as a dressing, with a view to the absorption of matter. It is sometimes applied dry, or various ointments may be spread upon it.

LIQUORICE. The root of the *Glycyrrhiza glabra*, a plant growing in Spain, which yields a great quantity of a very sweet substance called liquorice; which is advantageously employed both to sweeten nauseous drugs, and by itself, as a good demulcent. As such, it is much used in coughs, colds, and other affections of the wind-pipe and lungs; and when formed into lozenges of a convenient size, containing each about the sixth part of a grain of opium, it forms a very soothing application to the throat and larynx. These lozenges may be given to the extent of six or eight in the day. They are known by the name of troches of liquorice with opium.

LISBON. It was at one time very common to send consumptive patients to Lisbon, probably from its being easily accessible, on account of the commercial intercourse between this country and Portugal, as much as for the warmth of the climate. Such persons must have suffered much inconvenience from the bigotry and filthiness of the inhabitants. As the weather is not always steady, and the cold sometimes considerable, and as we have now a greater choice of places to which invalids can resort, medical men are not so much in the practice now of directing a residence in Lisbon. Yet the beauty of the scenery, and the deliciousness of the fruits, are highly extolled; and many, when sent in proper time, have derived much benefit from the change; especially those who have resided at Cintra, a romantic and beautiful place, a few miles from Lisbon.

LISBON DIET-DRINK. A decoction of various plants, which was at one time much employed in the cure of syphilis, and for the strengthening of the constitution after a course of mercury. The plants used were sarsaparilla, sassafras, guaiac, liquorice, and mezereon. What is called in the pharmacopœias the compound decoction of sarsaparilla, is now commonly prescribed instead of the Lisbon diet-drink.

LITHIASIS. The tendency to form calculous concretions in the kidneys or bladder. *See* STONE.

LITHONTRIPTICS. Medicines supposed to have the power of dissolving stone in the bladder. The perfection of a lithontriptic medicine would be, that it could be easily taken into the stomach, pass through the various organs of the body, till it reaches the kidneys and bladder, and there dissolve the stone, or break it down into particles small enough to pass by the urethra. But the existence of such a substance is against all probability. Even when a stone is thrown into a very active fluid, out of the body, it is not easily nor totally dissolved; and the fluid which has power on one stone has no power on others; and it is against all the known laws of the animal economy, to suppose that any such dissolving fluid could reach the bladder, without destroying many parts; and if it did get there, it would infallibly destroy the bladder itself. The only medicine having the most distant pretensions to do good in stone, is potash or its carbonates; and this they do, not by reaching the calculus in such a state as to dissolve it in the same way as muriatic acid would dissolve a lump of marble, but by preventing that acidity in the stomach and first passages on which the formation of stone seems in many cases to depend. This takes place in the following way: In healthy urine, there is a considerable proportion of an acid, called lithic or uric acid, which is so combined with the other ingredients, that the whole continue in solution. But if the digestion is bad, another acid is formed, and being carried to the kidneys, combines with the materials there, and the uric acid is precipitated in an insoluble form. This may happen in the kidney or ureter, and accordingly uric acid calculi are often found there. If the uric acid be deposited in the bladder, other matters may gather round it, and form a large stone. In order, therefore, to hinder the formation of unhealthy acid, and the consequent deposition of the uric acid, we aid the digestion by bitters and tonics, and correct acidity by alkalis and lime-water. As several salts are dis-

charged by sweat and insensible perspiration, so if the functions of the skin are not duly performed, these salts may find their way to the kidneys, and occasion the deposition of the uric acid. The perspiration, therefore, is to be regulated by diaphoretic medicines, by exercise, and proper clothing. We judge of the presence of an excess of uric acid, by examining the sediment deposited from the urine, or the small fragments which are sometimes passed with it. The uric acid generally gives a red deposit. In this state of the system, alkalis are the best remedies. Ten drops of the solution of caustic potash (aqua potassæ, Edin. Pharmacopœia) are to be given three or four times a-day, in a cup-full of beef-tea, or other convenient liquid. It is found that the carbonates of the alkalis answer the purpose of counteracting the tendency to form uric acid, equally well with the pure alkalis, and they are not so apt to disagree with the stomach. The carbonate of potash may be given in the dose of a drachm four times a-day, dissolved in two ounces of water, and flavoured with liquorice or cinnamon-water.

The carbonate of magnesia has been given as a lithontriptic, or as a counteractor of the tendency to stone; but it is not to be recommended, as it is rather insoluble, and though it may correct acidity in the stomach, no part of it will be absorbed to reach the kidneys or bladder. Lime-water has also been much recommended as fulfilling the same indications. When calcareous or magnesian salts prevail in the urine, acids are to be given; and we judge them to be proper, when the phosphates are deposited as a white sediment. The muriatic acid is as convenient as any other. But some calculi are composed alternately of acid and alkaline layers; in these, neither acids nor alkalis alone will be the proper lithontriptics. We are to give sometimes acids and sometimes alkalis, as the deposits of the urine may direct us. The proposal which has been made, of injecting solvents ot the stone into the bladder, would be an excellent one, could we insure the bladder from injury; but the irritable state of that organ renders it quite impossible to keep the solvent long enough in contact with the stone to do any service.

LITHOTOMY. The surgical operation for removing stone from the bladder. *See* STONE.

LIVER. The liver, which is the largest gland in the human body, is destined for secreting the bile. It is situated within the cavity of the abdomen, partly in the right hypochondrium, under the cartilages of the true ribs; it fills up this region and reaches as low as the kidney of that side; part of it is in the middle region called the epigastrium, and a small portion in the left hypochondrium. It has a superior convex surface adapted to the edge of the diaphragm, an inferior concave one resting on the stomach; its thick edge behind lies against the vertebræ, and its thin margin before corresponds to the lower edge of the chest. The liver is divided into three lobes; the right, which is by far the largest; the left, and a small one on its under surface, called the *lobulus Spigelii* from one of its first describers. This large organ is kept in its place by four ligaments; the middle or suspensory ligament between the right and left lobe; the coronary ligament by which its upper surface is connected to the diaphragm; and the broad ligaments of the right and left side. In the right lobe is a depression in which is situated the gall-bladder, which receives a portion of the bile for a time, when it is not wanted for the intestines. There are two ducts, one from the liver and one from the gall-bladder, by which the bile enters the duodenum for the purposes of digestion. *See* BILE.

The liver is subject to inflammation, both acute and chronic; to enlargement and hardness, which is a frequent cause of dropsy; and to obstructions of the ducts from spasm or gall-stones, occasioning jaundice. *See* DROPSY, GALL-STONES, *and* JAUNDICE.

LIVER, Inflammation of. I. *Acute Hepatitis.* The symptoms of this disease are the following: General fever, heat, thirst, pain in the right side, under the margin of the lower ribs, generally acute, but sometimes dull, difficulty of lying on the left side, sometimes difficulty of breathing, with a dry cough; occasionally a degree of jaundice; and very frequently a pain at the top of the right shoulder. This pain at a place so far from the inflamed part, is one of the most remarkable instances of sympathy between distant places, which are supplied with energy from the same nervous trunk. The same nerves which supply the muscles and organs at the top of the shoulder, send branches to the diaphragm; the convex part of the liver is connected immediately, almost by adhesion to the diaphragm, and, therefore, when this part of the liver is affected with inflammation, the pain is propagated by nervous sympathy to the top of the right shoulder.

Causes. The various causes of inflammation in general, may produce inflammation of the liver; such as a check to perspiration, blows, and other external injuries; but there are certain circumstances which dispose the patient to this inflammation more than to any other; and these are especially, intemperance in the use of strong liquors, and much external heat, more particularly the heat of the sun, and residence in a tropical climate; this last is aided in its injurious tendency by free living, whether in the food, or in the quantity and kind of strong liquors used.

Treatment. The cure of inflammation of the liver is to be conducted on the same principles as that of inflammation in general; by bleeding proportioned to the urgency of the case, and the strength of the patient; remembering, in tropical climates, to make allowance for the great debility which so rapidly follows high excitement. Purgatives are to be given; and it is a good practice to begin with the mercurial ones, which, by promoting the excretion of bile, relieve the liver of the distension which may be supposed to accompany the increased flow of blood to it. If the pain continues after one or two bleedings, a very large blister is to be put on the right side. The usual antiphlogistic regimen is to be vigorously enforced; great quietness, spare diet, and abstinence from strong liquors, and from beer or porter. When the acute symptoms have gone off, provided the strength be not much impaired, it is a prudent measure to give mercury in a moderate quantity, and to keep the mouth in a slight degree sore for a fortnight or three weeks, as this will probably prevent the hardened thickened state of the liver, which so frequently comes on after inflammation of that organ. If acute inflammation of the liver does not end in resolution, it may proceed to suppuration, and one or more abscesses may form in the liver; these may burst into the thorax, when the abscess is near the part of the liver attached to the diaphragm; in this case there is great risk of suffocation; or the matter may make its way into the abdomen, which is equally hazardous. Sometimes matter has found an outlet by the intestines, and the patient has recovered; or if the abscess points externally, it may be opened by puncture or by a seton. But in every case, acute or chronic, we should do all in our power to prevent suppuration.

II. *Chronic Hepatitis.* Besides the acute hepatitis above described, the liver is subject to further disorder, of a more insidious and dangerous kind, known by the name of chronic hepatitis. This is the disorder so prevalent and so pernicious to health, if not to life, which occurs in warm climates, more especially in the East Indies, where it is known by the name of "*the liver*," or liver-complaint, and from which the name and the disease are so familiarly known to British practitioners. The chronic hepatitis comes on very gradually, and in many cases, without any very prominent symptom to give warning of the danger; the countenance becomes sallow, the appetite is bad, the strength declines, and there

is great depression of spirits. So insidiously does chronic hepatitis proceed, that frequently, on dissection, the liver is found in a state of suppuration, though the patient had hardly complained of any pain near the liver during his life. A great proportion of Europeans, in warm climates, are victims of this disease. In temperate climates, where affections of the liver are more rare, the symptoms of this chronic inflammation are often ascribed to indigestion, which it certainly has a tendency to produce; but in India, whenever a person complains of pain at the pit of the stomach, or of any symptoms of indigestion, a practitioner should always suspect some disorder of the liver. The patient generally complains of pain, which he supposes to be in the stomach; this pain may be relieved by discharge of wind upwards, and thus the opinion is confirmed, that it is owing to an affection of the stomach; but the true explanation is, that the stomach, when distended with air, presses upon the liver, and this organ being in some degree inflamed, feels pain on pressure, and is relieved when that pressure is taken off. Pain is felt when any degree of pressure is made by the hand near the stomach; and as the disease advances, there is heat, quickness of pulse, thirst, and other feverish symptoms, especially towards night. The urine is scanty, and the stools, at first, are less frequent and copious than natural; sometimes remarkable for a darker, and sometimes for a lighter colour than usual; those colours frequently alternating for some length of time, and eventually terminating in flux. The structure of the liver becomes more solid and compact, and though there is not always an increase of bulk, yet in very many cases, both the hardness and an increased size may be felt externally. So important an organ as the liver cannot be long affected without producing very injurious effects on the system; first on the function of digestion, then on the general health and strength; and in very many cases, the hardened liver gives rise to dropsy of the belly, and of the cellular membrane in general.

Treatment. The principal means of cure in chronic hepatitis, consist in endeavouring to restore the healthy structure and action of the liver, and till this is accomplished, we aid the digestive organs by the exhibition of bitters and purgatives. Mercury, in its various preparations, especially calomel and the blue pill, has been much resorted to, especially in the East; and there is certainly not a more effectual disperser of hardened morbid structures than this very active mineral. In the use of so powerful a remedy, there is need of caution and discernment; it is a remedy that will not suit every constitution, nor every stage of the disease; and whoever, with rash empiricism, prescribes it in every case, of real or supposed hepatitis, will bring discredit on himself and on the favourite remedy. If at any time the symptoms become more acute, and the pain more urgent, it may be proper to take away blood from the arm or by leeches, to apply a blister to the side, and even to repeat a blister more than once. Very often, in the Indian form of the disease, no good can be done for the patient, unless he removes to a colder climate; and a voyage to the Cape, to St. Helena, or to Europe, is found absolutely necessary. Akin to this necessity for a complete change of circumstances, is that of totally renouncing the use of spirituous liquors; and also avoiding fermented liquors of every description, especially the very strong beer commonly exported to India. The strength is to be supported by tonic medicines, and proper nourishment.

LOBSTERS, *Astacus marinus.* A kind of shell fish a good deal used at table. They are very nutritive, but not very digestible, and on some constitutions they have such an effect as to give rise to a suspicion of their containing poisonous matter. They sometimes occasion pain of the throat, eruptions on the skin, and pain in the stomach. These symptoms are relieved by a cordial, followed by

laxative medicine. Lobsters are frequently to be found in the market underboiled, and are then very indigestible.

LOCHIA, the CLEANSINGS, or the discharge which takes place from the uterus for some time after child-bearing. Immediately after delivery, the discharge is of blood, which in a few days gradually diminishes, and is followed by a discharge of a greenish fluid of a peculiar odour. The flow of the lochia continues in different women from a week to a month; in some women, the red colour disappears and comes back again for some time, till the womb is reduced to its original size. It is a desirable thing that this flow should proceed with regularity, as many untoward symptoms take place, either when it is checked suddenly, or when the flow is greater than usual. Various circumstances occasion the suppression of the lochia, as passions of the mind, cold drink, or cold air applied; and the symptoms consequent are very alarming. Great fever, heat, and restlessness, pain of the head, back, and loins, delirium, inflammation of the uterus, colic pains, costiveness, are a few of those symptoms. The measures to be pursued for counteracting them, and for restoring the flow of the lochia, are the warm bath, if the patient can bear it; fomentations to the abdomen, large emollient clysters, and sudorific medicines, as antimony, or the acetate of ammonia, assisted by copious diluent drinks. When a profuse and general perspiration breaks out, the relief is very rapid and unexpected, and a practitioner will find a patient whom he left at his last visit in the most alarming distress, at his next in a great measure relieved and free from danger.

When the patient too soon attempts to get up, there is great danger of renewing the flow of the red lochia, by which a great degree of debility is induced, and the health in consequence is materially injured. It should be strongly inculcated on women in childbed, that it is highly imprudent to use any great exertion during the cleansings, and that they should not presume on their feeling soon well. When this immoderate flow has occurred, it is to be checked by confining the patient to the horizontal posture, by keeping the bowels easy by mild laxatives, by giving dry diet, and some astringent julep, made with sulphuric acid. Bark and port wine are to be given to keep up the strength, provided there be no fever present.

LOCKED JAW. A conspicuous symptom of a very dangerous spasmodic disease, called Tetanus. *See* TETANUS.

LONGINGS. In the early stages of pregnancy, the minds of women are often fretful and impatient, and cannot bear any contradiction. Among the vulgar and self-indulgent, it is an opinion, that if they do not get whatever they desire, whether any article of food or other object of attention, something very bad will happen either to themselves or to the child, particularly that the child will bear the mark of the object longed for, however loathsome and disgusting; and hence they are at no pains to restrain their capricious fancies, but expect the most ready compliance on the part of all around them. It should be known that all fears of imparting any marks to their offspring are utterly groundless; and though no person of common good nature would think of thwarting any harmless inclination or longing women might happen to take, yet it ought to be their own care not to be discomposed by every trifle, and not to occasion unnecessary distress or trouble to those about them. There is no doubt that in the state of pregnancy, the nervous system is with many in so irritable a state that the most prudent management is required; and by neglect or harshness, such symptoms may be induced, as will occasion both alarm and danger; and a prudent physician or friend will therefore be always disposed to err rather on the side of indulgence than of opposition, and will rather suffer the harmless longings of women to be indulged in all their absurdity, than run the risk of hurting their health by an injudicious sternness.

LOOSENESS *of the* BOWELS, *see* DIARRHŒA, *page* 193, *and* INFANTS, *page* 325.

LOTION. A wash for medicinal purposes. These of course must vary, according to the purpose for which they are intended; but it should be a matter of great deliberation whether the numerous lotions vaunted for their power in beautifying the complexion should ever be ventured on. They must either be totally insignificant, and have nothing but their fragrance to recommend them; or if they have more activity, it must be by the metallic preparations they contain, which are of too hazardous a nature to be used without the superintendence and direction of an experienced and respectable practitioner. "Gowland's lotion is a solution of corrosive sublimate in an emulsion formed of bitter almonds, in the proportion of about a grain and a half to an ounce. A solution of this mercurial salt in spirit of rosemary is also sold as an empirical cosmetic." (Dr. PARIS.)

LOUSY DISEASE, *Morbus Pedicularis.* In some cases of what Willan calls prurigo, an unusual number of lice infest the body, and adhere with great obstinacy, in spite of every attempt to destroy them. Mercurial frictions, tobacco lotions, and other acrid applications, are the means most likely to get rid of them; the utmost attention being paid to cleanliness in all respects. It is believed by the best informed physicians, that the marvellous stories on record of persons who have been destroyed by the lousy disease, are fabulous or exaggerated; and, at the worst, that the insects have been the maggots arising from the ova of the common domestic fly, or of the flesh fly. Unquestionably these ova, when deposited about the ear, the nose, or very near the brain, may allow the insects to get into situations where they are productive of the greatest pain and danger.

LOZENGES are composed of powders made up with glutinous substances into little cakes, and afterwards dried. This form is principally made use of for the more commodious exhibition of certain medicines, by fitting them to dissolve slowly in the mouth, so as to pass by degrees into the stomach, or to act upon the pharynx and top of the windpipe; and hence these preparations have generally a considerable proportion of sugar, or other materials grateful to the palate. The lozenges of the confectioner are so superior in elegance to those of the apothecary, that they are almost universally preferred. (*Edinburgh New Dispensatory.*)

LUMBAGO. A painful affection of the loins, of a rheumatic nature. It sometimes occurs as a part of general rheumatism, sometimes without any other part of the body being affected. It is situated at the lower part of the back and round the loins, is much increased by any attempt at motion, and not uncommonly is rendered worse by the warmth of the bed-clothes. If there be general fever, it will be proper to begin the cure by taking some blood from the arm; then to apply leeches, or cupping-glasses to the loins, to foment the parts, and to rub them frequently with camphorated oil, or with volatile liniment, or the tincture of soap with opium. If these remedies do not succeed, a mustard poultice, or a blister, must be applied. Lumbago is a very obstinate form of rheumatism, and often baffles, for a long time, all attempts to relieve it; it is also liable to return very frequently, and even to infest a person more or less, to the end of life. Those who are subject to it should wear a flannel or leathern bandage round the loins, should avoid all exposure to cold and damp, should not fatigue the muscles of the back by long standing in the erect posture, but rather strengthen them by moderate and regular exercise, as by riding; and when the pain is completely off, should use topical cold bathing, well assisted by repeated rubbing with a flesh-brush, or a warm dry towel, several times in the day.

LUMBAR ABSCESS. A collection of matter forming in the loins internally, and making its appearance along the psoas muscle, at the upper part of the thigh. At the commencement of the disease, there is some difficulty of walking, and uneasiness is felt about the loins; but, in general, there are large collections of matter formed without much previous pain, and without any indication of disease till it begins to show itself by an external swelling.

Causes. It is sometimes connected with disease of the bones of the vertebral column, but in many cases there is no such combination. It very often occurs in scrofulous constitutions without any obvious cause, and it may proceed from blows on the back and loins, and from exposure to cold and damp, as by lying on the ground when wet.

Treatment. If we have any symptoms to lead us to suspect the complaint coming on, we are to endeavour to prevent it by the application of leeches, by blisters, and purgative medicines. The great difficulty in the treatment of this disease, is to determine on the mode of opening the abscess, when we have decided that such a measure is proper. It is found by very general experience, that when these large collections of matter are freely opened, and admission is given to the external air, very terrible consequences ensue; and that there are produced hectic fever, wasting discharges of matter, and at length, death. A plan which has been adopted with success for opening them, is to make a puncture large enough to discharge the flakes of matter and clots of blood from the cavity, then to cover the wound, and get it to heal as quickly as possible. When the matter collects again, a fresh opening is made, and the same methods pursued as before. When the abscess has been opened, or when it has burst, which we must always endeavour to anticipate and prevent, the strength of the patient is to be supported by nourishing diet, and by a liberal allowance of bark and wine; at the same time, moderating the hectic fever, by sponging the body with vinegar and water, and paying the proper attention to the action of the stomach and bowels.

LUMBRICI, the long round worms like earth worms, found in the intestines. *See* WORMS.

LUNAR CAUSTIC. *See* NITRATE OF SILVER.

LUNCHEON. *See* MEALS.

LUNGS. The organs of respiration, situated in the cavity of the chest. They are divided into lobes, of which the right side contains three, and the left only two, in order to allow room for the heart and great vessels. All the blood of the body passes through the lungs, in order to be there exposed to the influence of the external air, by which it undergoes a change necessary to make it salutary for the body, which it is not, after having once circulated through it. The blood circulates through the lungs always contained in vessels, and it is believed to be exposed to the action of the air not directly, but through the medium of thin vesicles, as the windpipe is continued by branches continually getting smaller and smaller, till at last they end in points too minute for sight.

An organ of such importance as the lungs, so close to the moving centre of action, so abundantly supplied with blood, and so delicate in their own ultimate structure, may be easily supposed to be liable to very numerous diseases, and those of the most dangerous kind. Accordingly a very large proportion of fatal diseases are those which occur in the chest, either in the substance of the lungs themselves, in the membranes that line them, or in the numerous vessels that ramify through them.

Pleurisy, asthma, catarrh, consumption, spitting of blood, are some of the dangerous or painful diseases of the lungs; but the question often asked by non-medical persons with so much anxiety, about themselves or friends, whether the *lungs* are affected, seems to have reference principally to the symptoms of consumption. A medical man knows. that even in the

mildest cough of a common cold, the lungs are affected; and with perfect truth, he might give very alarming answers to unskilful inquirers: but restricting the terms to mean, whether that fatal ulceration has begun, which never stops, but ultimately destroys the patient, it is well worth our while to endeavour to ascertain whether a correct answer can be given to the question. Under the article CONSUMPTION, we have confessed the difficulty of giving a proper decision in the early stages of the disease; and have shown that the mucus expectorated in certain stages of catarrh, which is to go off without leaving any bad effects, is not to be distinguished from the purulent matter of fatal consumption. We are therefore to judge by the matter, only in conjunction with the other symptoms. When there is considerable pain and difficulty of breathing, when there have appeared streaks of blood in the spitting, when there is a frequent copious discharge of yellow and thick matter, with a bad smell, then we have reason to fear that the lungs are affected with that fatal malady which is at last to end the patient's life.

LUNGS, *Inflammation of.* This disease, known by the name of *Pleurisy*, may be situated either in the substance of the lungs themselves, or in the lining membrane investing them, and covering the inner surface of the ribs. For all practical purposes, the inflammation of these various parts may be included under one common name. The symptoms of inflammation of the lungs are the following: The disease comes on with coldness and shivering, and other symptoms of beginning fever, then the heat of the body is increased, the pulse becomes more frequent, full and strong, and there is very marked difficulty of breathing, especially when the patient attempts to draw in a full breath. The pain is generally greater when the patient lies on the side affected, but sometimes the contrary is the case. The pain is felt most commonly on one side, and some have supposed that the left side is more frequently attacked than the right, but this does not appear to be correct. Sometimes the pain is felt at the lower part of the breast, sometimes in the back, between the shoulders; the pain is commonly fixed in one spot, but sometimes shoots from the side to the shoulder, back or breast, and such shooting pains are called in common language *stitches.* The disease is always accompanied by cough, and this cough, in every case, is attended with very considerable pain at the beginning of the disease; it is dry, but soon becomes somewhat moist, and the matter spit up is streaked with a little blood.

Causes. The most common cause of pneumonic inflammation is cold applied to the body when heated, especially when there is perspiration on the surface. Such check to the perspiration is most likely to be followed by inflammation, when there is peculiar vigour in the system, or what physicians call the inflammatory diathesis; hence it occurs most frequently in the robust and young, in cold climates, and towards the end of winter or beginning of spring, when the changes of temperature are sudden and frequent. Besides exposure to cold, there are various other causes of pneumonic inflammation. Intemperance may excite general fever, and also inflammation of the lungs; violent exercise may do it; and great exertions of voice and breathing, as long and loud speaking, or playing on wind instruments, may do it; a blow on the breast may occasion it; and in measles, it is a symptom of the greatest danger.

Terminations of PLEURISY. The most desirable termination is that of resolution; and it is to accomplish this that our most strenuous efforts should be directed. It is known to be taking this favourable turn by the abatement of the pain and difficulty of breathing, by a gentle perspiration coming out, and by the strength and fulness of the pulse ceasing. Though the disease terminates in resolution, it is often found, on examination of the bodies of those who at one time or other of their

lives had been affected with inflammation in the chest, that adhesions had been formed between the investing membranes of the lungs and ribs. These adhesions are very common, and frequently occasion no inconvenience. If the disease does not terminate in resolution, but goes on to suppuration, the matter may burst into the lungs, and may destroy the patient by suffocation.

Prognosis. We consider the attack as being one of great danger, when the difficulty of breathing is very great, when the patient can lie only on one side, or on his back, or when he is obliged to be in the erect posture, and when there is much bloatedness and flushing of the face. It is also a bad symptom, when the cough is frequent, exciting much pain, when it is with very little expectoration, when the pains increase, and are in more places than at first; and especially when, in the early stage of the disease, a delirium comes on.

Treatment. Our grand and certain remedy, if any can be called so, is bloodletting to a very large extent; and though attempts have been made to prove these large bleedings unnecessary, or by the aid of certain medicines to diminish the quantity of blood drawn, yet there does not appear any just ground to depart from the practice sanctioned by the successful experience of ages, and of which the apparently debilitating effects are in general so soon recovered from. The quantity of blood to be drawn must not be limited by ounces or pounds, but be regulated by the constitution of the patient, by the violence of the disease, by the appearance of the blood drawn, and by the relief which is afforded by the bleeding. Sixteen ounces of blood, or an English pint, is a very moderate bleeding from an adult; and more frequently, pneumonic inflammation will require three times that quantity to be taken at once. It is in this disease that we see very conspicuously what is called the buffy coat, on the blood. This is a thick tough leathery crust which shows itself on the surface of blood drawn in inflammatory diseases when it has been allowed to rest and coagulate; and from the thickness and firmness of this crust, we form a judgment of the degree of inflammation present; and its appearance satisfies us that we have been quite authorized to take away blood, though we are by no means, as some have advised, to continue our bleeding till the inflammatory crust ceases to show itself. If our first large bleeding does not give the relief that we desire, in the course of four or five hours, we are to repeat the bleeding, and to give a very smart purgative of salts, or of jalap and calomel, and to apply a large blister over the seat of the pain. It may be necessary to repeat the bleeding five or six times, before any relief is obtained. The quantity of blood necessary in the cure of pleurisy is often very great indeed, amounting to no less than twelve or fifteen pounds in the course of three or four days. But sometimes the pain continues severe, the symptoms urgent, and the danger great; and that, when any further bleeding would be more hazardous than the disease. In this case, we must try leeches or cupping, and repeat the blister. To promote the expectoration, we may give squill, mucilaginous mixtures, or calomel in small doses, combined with antimonials; as two grains of calomel, with half a grain of tartar emetic, or with three grains of the antimonial powder, or James's powder, in jelly, every four hours. Formidable and painful as this disease is, these remedies are in a very great proportion of cases successful in removing it; and we consider our purpose as in a fair way of accomplishment, when we find the pain and difficulty of breathing diminished, and the other favourable symptoms occurring as above mentioned. We also consider it as a favourable symptom, when the patient spits up an orange-coloured mucus, and that even though there should be some streaks of blood in it. It is also good, when a fiery pustular eruption breaks out in some parts of the body, as about

the mouth. We judge that the disease is about to proceed to suppuration, when it is protracted beyond six or eight days, in spite of the proper remedies actively employed, when the difficulty of breathing continues, though the acute pain is removed; and when the patient has been seized with frequent shiverings; and we conclude that an abscess has actually formed, when there is a sense of fulness and weight, where formerly there was pain; and even in some cases we are made sure of this by a swelling pointing outwardly, and giving a sense of fluctuation. The patient is now said to have empyema. The danger to be apprehended from suppuration within the chest is very great, though the degree of danger may vary a little according to the place where it bursts. If it bursts into any of the two great branches of the wind-pipe, it may prevent the free passage of the air, and suffocate the patient; or if it breaks into the smaller divisions, it may give rise to a gradual discharge of purulent matter, continuing for a long time, and proving the commencement of consumption of the lungs. The matter spit up is often of a most offensive smell. If the matter points outwardly, it is to be let out by a surgical operation, a small puncture being made slightly transverse, and rather nearer the upper margin of the rib, in order to avoid an artery which runs along a groove in the lower margin of each rib. Care must be taken to prevent the admission of the external air, as this might both be apt to occasion hectic fever, and to impede the free expansion of the chest by counteracting the weight of the air drawn in by the mouth. *See* EMPYEMA.

LUXATION. *See* DISLOCATION.

LYMPH. A clear fluid poured out by the extremities of the arteries into various cavities of the body, and into the cellular substance.

LYMPHATIC VESSELS. A set of vessels in the animal body, numerous and important, which open into the cellular texture and into the various cavities, and absorb the lymph and other watery fluids, convey them through glands situated in different parts of the body, till they pour the fluid into the thoracic duct, the same to which the lacteals convey the chyle; and from which the two fluids are carried into the lungs, there to be completely fitted for the purposes of the body. When the lymphatic glands are diseased or any way obstructed, they give rise to hard knotty swellings in various parts of the body; and they are thought to be peculiarly the seat of scrofulous inflammation. Such swelled glands are often seen in the neck and groin. The best way to promote the healthy action of the lymphatic vessels and glands, is to wear warm clothing, to use moderate and constant exercise, to pay attention to diet, and to the regular action of the bowels.

M

MAC

MACE. The external covering of the nutmeg. By drying, it acquires a reddish yellow colour. It has a strong agreeable smell, and an aromatic bitter taste. It yields an expressed oil, and its medicinal properties are those of an aromatic and stimulant; though it is rather to be regarded as an aromatic spice, than as an article of medicine.

MAD

MACERATION. The separation of one part of the body, or of one layer of a texture from another, by long steeping in water.

MADDER, *Rubia tinctorum*. A plant, the root of which yields a fine red dye, and which has the remarkable property of tinging, of a red colour, the urine, milk, and bones of animals which are fed

with it. It has been celebrated for its powers of promoting the menstrual discharge, but without the smallest reason.

MADEIRA. This island has long enjoyed a high character as a resort for consumptive patients, from the equality of its temperature, and the salubrity of its climate. The mean annual range of temperature is only 14°, and the heat is distributed through the year with surprising equality, the winter is only 20° warmer than at London, while the summer is only 7° warmer. The equality of temperature between the night and day is remarkable, and also between the different seasons, and between one day and another. It is exempt from keen cold winds; the rains generally fall at regular and stated periods.

The benefit derived from a removal to Madeira, in those cases for which it is principally recommended, viz. the consumptive, depends entirely on its being adopted at a proper time before the symptoms are confirmed and the disease far advanced. Dr. Clark quotes the observation of medical men who have resided on the island, and regards them as showing, "in a striking point of view, the necessity of discrimination in sending patients to Madeira; and how deeply impressed medical men ought to be, with the heavy responsibility which they take upon themselves in deciding on a question of such importance. By far the greater number of the patients referred to should never have left their own country; the advanced period of their disease could leave no reasonable prospect of benefit from such a measure. The result of those cases sent to Madeira at the proper period is very different. The effects of the climate on incipient cases, and those threatened with the disease from hereditary or acquired predisposition, are highly encouraging, and should lead medical men to recommend such a measure at the only time when it promises benefit."

The principal disadvantage of Madeira is the want of opportunity to take regular exercise in the most beneficial way. "The steepness of the whole island renders wheel carriages useless. Invalids must therefore ride, or be carried in palanquins or hammocks. There is abundance of horses, sure-footed, and accustomed to the roads, the steepness of which is less objectionable to a class of invalids who ought to take their exercise chiefly on horseback at a moderate pace. Invalids intending to pass the winter in Madeira should leave this country in the end of September, or the beginning of October. The beginning of June is sufficiently early to leave the island to return to England." (CLARK *on Climate.*)

MADEIRA. A wine brought from the island of that name. It is more stimulant than port; it agrees well with the stomach, and is excellently adapted for debilitated constitutions, and for rousing the nervous energy in the weakness of typhoid diseases. But good Madeira wine is difficult to be procured; it is no longer made of the same excellence as formerly; and the trade, according to Mr. Brande, overflows with a variety of inferior and mixed wines, of all prices and denominations, to which the name of Madeira is most undeservingly applied. In its purest form, Madeira generally is more acid than either port or sherry, and is consequently not so well adapted to stomachs inclined to acidity, where it is generally found peculiarly heating and irritating.

MADNESS. *See* INSANITY.

MADNESS, CANINE. *See* HYDROPHOBIA.

MAGNESIA. A species of earth, of great benefit in correcting acidity of the stomach. It is of the class of what are called alkaline earths; and having an affinity for acids, it attracts to itself whatever acid it finds in the stomach, and forming with it a purgative salt, it produces several easy motions of the bowels, and so removes the acidity, heartburn, and other unpleasant symptoms. Magnesia may be taken to the extent of a teaspoonful twice or thrice a-day, according to the urgency of the symptoms; and it may be mixed with water, or peppermint-water, or any similar fluid, to diminish

its insipidity. Magnesia may be safely and usefully given to children, even when very young, mixed with their panado or thin gruel. The best magnesia is what is called burnt or calcined magnesia. Magnesia is either found in nature, combined with the carbonic acid, or it is obtained in that combination in the process of preparing it from Epsom salts, which are magnesia combined with sulphuric acid. This carbonate of magnesia answers the purpose of correcting acidity, and is cheaper, but in some cases may be disadvantageous, on account of there being an escape of carbonic acid, which gives rise to flatulency in the stomach and bowels. By exposing the carbonate of magnesia to a strong heat for a proper length of time, the carbonic acid is driven off, and the pure magnesia remains, which is then termed pure, calcined, or burnt magnesia. Double the quantity of the carbonate is required to produce the same effect as the calcined magnesia.

MAGNESIA, SULPHATE OF. *See* EPSOM SALTS.

MAGNETISM. The attraction of the loadstone for iron. At one time, 1780-84, there was a very great sensation excited by the report of surprising effects produced on the human body, both in health and sickness, by the action of magnetism; but after a very full and patient examination of the subject, by some of the greatest philosophers of the age, it was universally acknowledged to be the mere effect of a credulous imagination deceived by artful imposture. Since that time, animal magnetism has ceased to be talked of, and has given way to other objects of popular credulity.

MALARIA is that property of the air or other circumstances about particular places, which gives rise to the prevalence of dangerous fevers, principally of the remitting form. Though these fevers are prevalent in many different regions of the globe, the term *Malaria* is chiefly applied to Rome and its vicinity, or at least to the South of Europe. For the description of the fevers produced by the malaria of different countries, we refer to AGUE, page 11, *et seq.* and FEVER, REMITTENT, page 259; and from the work of Dr. Clark on Climate, we extract some of those circumstances respecting malaria, which it is important for travellers to know, with the view of enabling them to avoid its effects.

"In the first place," says Dr. Clark, I may observe, that the malaria fevers of Rome are exactly of the same nature, both in their origin and general characters, as the fevers which are so common in the fens of Lincolnshire and Essex in our own country, in Holland, and in certain districts over the greater part of the globe. The disease is the same, from the fens of Lincolnshire, or the swamps of Walcheren, to the pestilential shores of Africa; only increased in severity, *cæteris paribus*, as the temperature of the climate increases.

"These fevers have generally been attributed to the direct action of something extracted from the soil; but of the nature of this agent, we are quite ignorant, and its existence is even doubted by many. It is singular, that this opinion, which originated with Lancisi, should be wearing away in Italy, whilst it may be said to be extending itself in England. (We are inclined to believe Lancisi and the English in the right.)

"It would appear, that under ordinary circumstances, a certain period of residence in the *malaria site* is necessary to prepare the body for an attack of this fever; and that there is no reason for the fear commonly entertained, of a sudden attack of malaria, from simply passing quickly through a malaria district. I found that the German, French, and English artists, and others who reside a considerable time in Rome, were more frequently attacked with fever the second or third years of their residence, than the first. The malaria fever at Rome seldom appears before July, and ceases about October, a period during which few strangers reside there. The fevers of this kind, which occur at other seasons,

are generally relapses, or complicated with other diseases. One of the most frequent exciting causes of this fever is exposure to currents of cold air, or chills in damp places, immediately after the body has been heated by exercise, and is still perspiring. Exposure to the direct influence of the sun, especially in the spring, may also be an exciting cause; it has certainly appeared to me to produce relapses. Another cause of this disease is improper diet. An idea prevails, that full living, and a liberal allowance of wine, are necessary to preserve health in situations subject to malaria. This is an erroneous opinion, and I have known many persons suffer in Italy from acting on it. In regulating the diet of persons living in a malaria country, regard should be had to the nature of the climate. The same stimulating regimen which might be borne, and even prove useful in the damp chilly atmosphere of Holland, will not be suited to the exciting climate of Italy. Sleeping with open windows, either during the day or night, more especially, in a place known to be subject to those fevers, is very dangerous, and I have known repeated instances of fevers produced in this way. Towns are always safer than villages, and the latter, than country houses, and the central parts of a town are also safer than the suburbs.

"Much has been said about the healthy and unhealthy quarters of Rome; and in this respect, there is certainly a material difference in the summer; but in the season during which strangers reside there, this circumstance deserves much less consideration. More is to be feared from currents of cold air in the winter than from a confined humid atmosphere, which last is the evil to be avoided during the summer. Thick and lofty trees close to a house tend to maintain the air in a state of humidity, by preventing its free circulation, and by obstructing the free admission of the sun's rays. Trees growing against the walls of houses, and shrubs in confined places near dwellings, are injurious also as favouring humidity; at a proper distance, on the other hand, trees are favourable to health. On this principle, it may be understood how the inhabitants of one house suffer from rheumatism, headach, dyspepsia, nervous affections, and other consequences of living in a confined humid atmosphere, while their nearest neighbours, whose houses are more openly situated, enjoy good health. Dryness, with a free circulation of air, and a full exposure to the sun, are the material things to be attended to in choosing a residence.

"It has been repeatedly asserted, that the influence of the malaria is increasing rapidly around Rome, and that from this cause, at no very distant period, the place will become uninhabitable. I could not, however, discover any good grounds for this opinion. Indeed, the malaria fevers were much less prevalent during the last five years of my residence at Rome, than they had been previously. This was attributed, and I believe justly, to the unusual dryness of the seasons.

"Persons attacked by this fever should be strictly confined to the house until the disease has been completely checked; and as soon as this is fairly effected, the sooner they change the air, the more likely will they be to avoid relapses, and to prevent a disposition to a return of the disease being fixed on the constitution—a circumstance of great consequence to the future health of the individual. During the autumn or winter, such persons may go to Naples; if the spring is far advanced, Florence will be the better place." (CLARK *on Climate.*)

MALE FERN, *Polypodium filix mas*, now called *Aspidium*. A fern which has obtained some reputation by the powder of its leaf being employed with occasional success in the cure of tape-worm. The manner in which it is used is the following. One or two drachms of the powdered root of the fern are to be taken at night, and a brisk purgative of senna, jalap, or gamboge to be given next morning. This is further assisted by a considerable quantity of green tea. Probably

when these measures are successful, it is not the fern that deserves the credit.

MALIC ACID. The acid obtained from apples and other fruits. It is not used in medicine in its separate state.

MALIGNANT FEVER. *See* FEVER.

MALIGNANT SORE THROAT. *See* SCARLET FEVER.

MALT LIQUORS contain a considerable portion of nutritive matter, and a less proportion of spirit than wines; and they also contain a bitter principle derived from the hop, with some soporific properties. Those who use much malt liquor generally grow fat. They have the muscular strength increased, and the general health for a time improved; but if carried to excess, and if proper exercise be not taken, a fulness of the system is induced, and it is rendered liable to all the diseases which such a state brings on. As very concentrated nourishment will not be well digested, because the stomach requires a certain bulk as well as quality of food in order to the production of good chyme, malt liquors agree best with those in the poorer walks of life, whose food, though bulky, is not very nutritive, but whose stomachs are enabled by the stimulus of the hop to extract a good deal of nourishment from what they eat. Malt liquors are infinitely preferable to spirits for the labouring classes; but those who live well, and indulge in a variety of dishes, have no need of the stronger kinds of malt liquors; though table beer would assist their digestion very considerably. The principal kinds of malt liquor in use are, Beer, Ale, and Porter.

MALVERN WATER. The water of a spring near the village of Great Malvern in Gloucestershire, of considerable efficacy in various diseases. It contains some carbonic acid, and some lime or magnesia, and it soon acquires a fetid smell by standing in open vessels. It is a good deal employed as an external application, and is very useful in deep ulceration of a scrofulous nature, and attended with much irritation. Scrofulous ophthalmia is also much benefited by Malvern water. Cutaneous diseases are also much relieved, and the itching of herpetic eruptions is greatly allayed by it; it is in the irritable state of the skin that it is of more benefit than in the state where the skin is cold and the circulation languid. Malvern water is used internally in cases of discharge of bloody, fetid, or purulent urine, and in the feverish state which accompanies large scrofulous ulcers on the surface of the body. It is said, at its first use, to occasion headach and drowsiness, with slight vertigo, which however soon go off, or may be removed by a purgative. It almost always increases the flow of urine, and improves the health of the patient, though it has no very decided effect on the bowels.

MANDRAGORA, *Atropa mandragora*. A plant formerly supposed to have the property of inducing sleep, but now quite neglected.

MANGEL WURSEL, a species of beet, a plant of some importance, as being a substitute for bread in times of famine. It has succeeded better in Germany than in this country. It is sometimes cultivated to be given to cows.

MANGO, *Mangifera Indica*. The fruit of an Indian tree, cultivated all over Asia. Mangoes are of a fragrant odour juicy, and of a good flavour, and are eaten either raw or preserved with sugar. Their taste is very luscious. The unripe fruits are sometimes used as a pickle, being preserved with salt, capsicum, or other spices.

MANGOSTEIN. *Garcinia Mangostana*. A fruit about the size of an orange, which grows plentifully in the Asiatic islands. It is a fruit of the most delicious flavour, having an exquisite mixture of sour and sweet in its taste. It is white, juicy, and transparent; and this white part is surrounded by a rind of very great astringency, which may be used in those cases of dysentery and diarrhœa where astringents are proper. A decoction of the rind makes a good gargle in sore throats.

MANNA. A substance which exudes spontaneously in dry and warm weather, from a species of ash, the *Fraxinus ornus*, which grows in the South of Europe, especially in Calabria and Sicily. It concretes upon the bark. Several varieties of manna occur in commerce; the purest is called flake manna, others are smaller fragments, having a great many impurities mixed with them. The smell of manna is slightly disagreeable, its taste is sweet and nauseous. It is chiefly used as a mild aperient for children, either by itself for very young infants, or to sweeten the infusion of senna for those of a more advanced age. The dose is a drachm or two. For adults it is not to be depended on as a purge. In some constitutions it produces flatulency and distension of the bowels, which effects are to be obviated by giving some aromatic, as ginger or the like.

MANNA CROUP, or *Semolina* is believed to be the powder of a Russian grain. It affords a good article of farinaceous food, and may form part of the diet of very young children. It is boiled like porridge, and may be eaten with milk and a little sugar.

MARASMUS. *Blight, or Atrophy.* A wasting of the body, rather to be considered as a symptom of some other disease, than as a disease of itself, and, accordingly, it is not applied by medical writers, to designate any particular disease; but it answers pretty exactly to what Scottish mothers mean to express by the word *dwining*; viz. that state of protracted ill health, during which a child ceases to thrive, and loses flesh and strength with considerable rapidity. This gradual wasting of the body may be owing to various causes, a bad state of the stomach and bowels, teething, scrofula, or an original weakness of constitution. It is a common symptom of diseased mesenteric glands. We are to endeavour to find out the particular exciting cause, and to direct our treatment accordingly. Marasmus most commonly arises from a derangement of the digestive powers, and an irregular action of the bowels. We are to correct acidity by chalk or magnesia, to strengthen the stomach by giving rhubarb in powder or tincture, to procure a steady and regular determination of the bowels downwards by purges of calomel, alone or combined with other purgatives; and those assisted by the interposition of purgatives of a different nature, as senna, castor oil, or neutral salts. When a patient has continued to use purgative medicines for ten days or a fortnight, we are to stop for an equal time, and then begin again, always remembering that it is not the intention, by giving these purgative medicines, to produce watery, frequent, and weakening discharges, but merely to solicit a regular and free evacuation of excrementitious matter; and we are, therefore, to regulate our doses and their frequency accordingly. The general health is to be improved by regular exercise, by being much in the open air, not confining the child too much to crowded school-rooms; by cold bathing and sea bathing in the proper season, and by the most scrupulous attention to diet; giving only such food as is nourishing and easily digested, avoiding butter, pastry, and sweetmeats, especially almonds; orange-peel, and unripe fruit. These measures may be assisted by frequent rubbing of the spine and belly with camphorated oil or soap liniment, or with plain sweet oil, continuing the rubbing for a quarter of an hour or twenty minutes at a time.

MARMALADE. A sweetmeat made by preserving the rind of oranges cut into small pieces, and boiled with sugar. It is an excellent stomachic with some, but with others it proves rather indigestible.

MARROW. The oily substance contained in the hollow tube of the long bones, contained in cells. The marrow in the bones of beef is eaten at table, and is highly nutritious.

MARSHMALLOW. *Althæa officinalis.* A plant found on the banks of rivers, the whole of which, and especially

the root, abounds with mucilage. It is used as a demulcent, in various pulmonary complaints, and in affections of the urinary organs. From one to two pints of the decoction may be taken daily.

MASTICH. A resinous exudation from the *Pistacia lentiscus*. It is principally obtained in the island of Chios; and is used in Turkey to preserve the teeth, and to give a pleasant smell to the breath. Its medical virtues are insignificant, but it is a useful addition to some pills, as it renders them more slowly soluble in the fluids of the stomach and bowels, and, therefore, more progressive in their operation. The principal pills into which mastich enters are those made of aloes, and intended to act as a gradual laxative, and promoter of digestion. They are called Dinner Pills. Three are a proper dose.

MATERIA MEDICA. "Every substance employed in the cure of disease, whether in its natural state, or after having undergone various preparations, belongs to the Materia Medica, in the extended acceptation of the words. But in most pharmacopœias, the Materia Medica is confined to simples, and to those preparations which are seldom prepared by the apothecary himself, but commonly purchased by him, as articles of commerce, from druggists and others. Systematic authors on this branch of medical knowledge have bestowed much pains in contriving scientific arrangements of these articles. Some have classed them according to their natural resemblances; others according to their active constituent principles; and others according to their real or supposed virtues. Each of these arrangements has its particular advantages. The first will probably be preferred by the natural historian, the second by the chemist, and the last by the physiologist. But every scientific classification hitherto proposed is liable to numerous objections. Accordingly, in the pharmacopœias published by the Colleges of Physicians of London, Dublin, and Edinburgh, the articles of the materia medica are arranged in alphabetical order; and the same plan is now almost universally adopted." (Dr. Duncan's *Edinburgh New Dispensatory*.)

MATLOCK. A village in Derbyshire, famous for yielding a mineral water of the acidulous class. Some of the Matlock springs have a temperature of 66°. It forms a proper tepid bath for those of irritable, weak, constitutions; and is generally recommended after the use of Bath and Buxton waters; and as preparatory to sea-bathing.

MEADOW-SAFFRON. *See* Colchicum Autumnale.

MEALS. The quantity of food taken at regular intervals is commonly understood by the term *meal*. On this subject there are several particulars to be considered; with respect to the kind and quantity of food that ought to be taken, the interval between each meal, and the conduct to be pursued previous to meals, and after them. It may appear ridiculous to make any formal remarks on what may be supposed level to the capacities of all mankind, and directed by the sure instinct of nature; but the luxurious habits, and the artificial modes of civilized life, in those who are any degree above the class that is doomed to toil and poverty, render it a subject of very general interest. The importance of attending to the diet of invalids and convalescents, makes it a matter of primary moment to know the best mode of regulating the time, the quantity, and the quality of the meals. On a subject where there must be such a variety of circumstances in different individuals to be taken into account, it is obvious that no set of rules, applicable to every case, can be laid down. Whatever may be said, is to be considered as the result of observation and experience, which can only furnish general truths and maxims, to be accommodated to particular cases, according to circumstances.

One of the most important circumstances about meals is their regularity, both as to number, and the periods at

which they are taken. Habit has such an influence on the appetite of hunger, as well as on many other of our sensations, that it will return at the stated hour of eating; and if it be not appeased, the stomach will cease its cravings, though no aliment has been supplied. But hunger will in many persons recur before the time usually allotted for the regular meal; and it will often be necessary to take some food, to enable the stomach to hold out till its accustomed period. In a healthy person whose digestion is good, who has taken sufficient exercise, and who in a morning has taken no very substantial or copious repast, the *Luncheon* will probably be a matter of indispensable necessity; but many of those who take luncheon find it to spoil the digestion both of itself and of their dinner; much more will this be felt by the dyspeptic patient, who needs his stomach to be undisturbed during the digestion of his regular meals, and who should not exhaust his powers by calling them too frequently into action. If additional food be taken before the former portions are assimilated, the process will be disturbed; and however plausible may be the maxim, that the stomach will be best managed and the strength improved, by taking small quantities of food very frequently, yet this is not found to be true; in fact, the invalid thrives much better by regular meals at proper intervals, than by that constant throwing in of supply as fast as a morbid craving calls for it, or as a false theory says it should be swallowed.

The number of meals to be taken cannot be subjected to any constant rule. Most people take three in the day; one copious and substantial, the others more sparing, and with a larger proportion of fluid. Some hardly consider tea as a meal, and some dispense altogether with supper. Those who dine plentifully, and dine late, that is to say any time after five, may well dispense with supper; but those who dine before three, will find it for their comfort to take a light supper before going to bed.

The quantity of food to be taken at each meal, it is quite impossible to limit by weight or measure. It is a moral duty to stop short at the point where nature is satisfied, as indicated by a certain feeling of satiety that few persons may not be conscious of experiencing at every meal; and those who are at all in bad health, especially with dyspeptic symptoms, ought to be still more watchful of the coming on of this sensation. There is a moment, says Dr. Philip, when the relish given by the appetite ceases; a single mouthful taken after this, oppresses a weak stomach. If a patient eats slowly and attends to this feeling, he will never overload the stomach. But eating *slowly* is essential to this matter: when one eats fast, hunger may continue for some time after the stomach has received more than sufficient. This rule will be found universally to apply; when the stomach is enfeebled, the feeling of satiety will the sooner come on; when by exercise its powers are invigorated, it will be enabled, without repletion, to take in a larger quantity. Though it is bad to exceed in quantity of food, and though a great proportion of people might do with a great deal less than they commonly use, yet it is equally certain that under-feeding both diminishes the strength, and renders liable to diseases. This is seen in the poorer classes, and in certain districts of our country where the food is principally composed of vegetables. It is proper for those who in general feed to the full, to practise abstinence occasionally, by avoiding solid food, and taking some weak broths. By incessant copious feeding, that state will be induced which is called high health, but from which the transition is easy and probable, to fevers and various other complaints.

Convalescents should be very cautious not to urge too hastily their return to strength and vigour. After an acute disease, the person, weak and emaciated, has a good appetite; but it is dangerous to indulge this, lest he bring his system too rapidly to that state which, relatively

to him, is that of high excitement, and liability to inflammatory diseases.

When habits are once formed with respect to the quantity and quality of food, they should not be suddenly altered. Some have no doubt been successful, in rapidly changing from a nutritious and stimulant diet to a spare one; but it is generally safer to alter the habits by degrees, provided it be really and steadily done. On the other hand, it is equally well known, that those who have been long fasting run the greatest risk of suffering, even fatally, by the sudden use of too much nourishing food.

Mixture of different kinds of Food at one MEAL. The late Dr. Gregory, when lecturing on the gluttonous habits which so certainly give occasion to the gout, gave a strong and indignant description of the luxury of a modern dinner; and every practitioner who is more anxious to benefit than to please his patients, will agree in his condemnation of the quantity and variety of dishes which are too commonly swallowed. First, the stomach is distended with soup, of richness and quantity sufficient to be a dinner of itself; then fish, with its various stimulating and indigestible sauces; then solid beef or mutton, fowls, tongue, game, puddings; then pastry, confectionary, cheese, and fruit. These various substances differ so much in the ease with which the stomach can digest them, that while some have passed out of that organ, it has still a great deal more to dispose of; and the various mixtures are productive of heartburn, flatulence, and all the symptoms of indigestion. All persons of weak stomachs should eat but one, or at most, two kinds of food at one meal; and even those who are in health, will be likely to continue so, the more carefully they follow this maxim as a general rule.

Directions for Invalids before and after MEALS. Exercise is undoubtedly necessary for promoting the health of all, and of signal advantage in regulating the digestive powers; but the time and quantity of exercise to be taken, must vary with the circumstances and habits of each individual. To walk before dinner for an appetite is a very common practice, but if this be carried the length of fatigue, it will hurt the digestion instead of aiding it. No dyspeptic patient should take a full meal while he is in a state of fatigue; but moderate exercise in the open air, when not pushed the length of exhaustion, is an excellent preparative for a temperate dinner. Exercise, a few hours after dinner, is a very good promoter of digestion. Hence one disadvantage of very late dinners, that there is no proper opportunity after them for taking exercise and inhaling pure air. Sleeping after dinner, the *siesta*, as the Spaniards call it, is very common in warm climates, and it certainly appears there to be very refreshing; but is less necessary in our temperate regions. Debilitated persons may with propriety indulge it for a little

MEASLES. An eruptive disease arising from contagion, attended with catarrhal and pneumonic symptoms, from which few individuals of the human race are exempt, but which attacks them only once in the course of their life. As it is generally children who are affected with measles, and as it is a disease accompanied with very dangerous symptoms in many cases, it becomes an important object of domestic attention; and we shall, therefore, give a pretty full description of the symptoms and treatment of measles.

Symptoms. When the contagion of measles has been received into the body, the patient, for some time feels indisposed at intervals, and then appears well again. At last, a shivering and coldness come on, soon followed by increased heat, thirst, and other feverish symptoms, with sickness, loss of appetite, vomiting, and in some rare cases, with convulsion-fits; but these are by far more common in the commencement of small-pox. Sometimes the fever is sharp and violent from the first; sometimes it is more obscure and mild, but it generally is very violent before the measles show themselves on the skin, which generally happens on the fourth day from the at

tack of shivering and cold stage of fever. From the very commencement, there are all the symptoms of catarrh, hoarseness, a very frequent rough cough, difficulty of breathing, swelling and redness of the eyes and eye-lids, and a running of sharp acrid matter from the eyes and nose. With all this, there is often severe headach, throbbing at the temples, and great drowsiness. The eruption generally appears on the fourth day, first about the face and under the chin, and then on other parts of the body. It first appears in small red points; but a number of those come together, and form themselves into semicircular patches, in the intervals of which the skin is not very much different from its natural appearance. It is by this, that the eruption is distinguished from that of scarlet fever, where the skin is uniformly of a bright red colour. The eruption is very slightly prominent, and appears a little rough to the touch. The eruption continues pretty bright for two days, but about the third it fades a little, and becomes of a brownish hue; and in a short time, about two days more, it totally disappears, and a powdery scaling off of the outer skin takes place. A looseness of the bowels occasionally comes on when the eruption is subsiding. The fever is sometimes of alarming violence, and it does not, in general, subside when the eruption comes out; on the contrary, its violence is occasionally increased till after the fading of the eruption. Whether the fever subsides or not, the cough commonly continues with great severity for a considerable time; and the difficulty of breathing increases, and is accompanied with pain and other symptoms marking a degree of inflammation of the chest. This tendency to inflammation of the chest and disorder of the lungs, is what renders the measles so troublesome and dangerous a disease; and in too many cases brings on a protracted illness, or causes sudden death, when the disease appeared to be going entirely off.

The danger in measles is owing to the tendency they have to end in acute catarrh or inflammation of the lungs; but in some rare epidemics, they have been known to assume a putrid or malignant form. The time when measles generally make their appearance as an epidemic, is about the month of January, and they continue till some time in May; though, from particular circumstances, there may be cases at any time; and, from the numbers that generally take them in one epidemic, the measles are not very prevalent each successive year, but intermit for a year or two, till a new succession of subjects for the disease comes into existence.

Treatment. It is a matter of high importance to regulate the temperature in which patients should be kept during measles. Happily the absurd and destructive practice of loading the patient with bed-clothes, and heating his system by hot rooms and large fires, and by giving strong aromatics and stimulants, is now almost universally exploded; and in no class of diseases, has a return to better plans been more beneficial, than in eruptive diseases. When natural or inoculated small-pox occur, which they can do, only from the most unpardonable obstinacy in resisting vaccination, the patient is now kept cool, with the most evident mitigation of the disease. In measles, we should be inclined to adopt the same lenient and cooling method, but here we are deterred by the fear of repelling the eruption, and occasioning a determination to the lungs and chest. The safe and rational plan, therefore, is to keep the patient in measles in an *equal moderate temperature*, avoiding all unnecessary, artificial, and external heat, and taking care that the patient, on the other hand, be not exposed to cold. In the early stages of measles, the fever is sometimes of the most alarming appearance; but in general, even then, it is not necessary to do any thing more, than to supply the patient plentifully with mild diluent drinks, to administer a gentle laxative, and to sponge the head and temples with tepid vinegar and water; or if the eyes be much affected, to apply

tepid milk and water to them. If the oppression and difficulty of breathing be great, before the eruption comes out, it is of great service to put the patient into the warm bath, and to repeat this once or twice, if the urgency of the symptoms continues. In general, this helps out the eruption, and relieves the patient; but the fever and cough not unfrequently continue after the eruption comes out; and we are then to give antimonial and other medicines to promote perspiration, mucilaginous and sweet mixtures, with squill or Tolu Balsam, to allay the tickling cough; and if the pain and other pectoral symptoms still continue severe, we are to have recourse to bleeding and other means for reducing inflammation, proportioned to the age and strength of the patient, and the violence of the disease. The subjects of measles are generally so young, that it is not easy to get blood from a vein; we are therefore compelled to get blood by leeches. We are not to be understood as saying, that blood-letting is universally or even very frequently necessary in children; but the practice is highly proper when the cough and pain of the chest are urgent. This very frequently is owing to the eruption being repelled by cold, in which case, the warm bath is exceedingly beneficial. In adults, we are to draw blood speedily and copiously by the lancet. A blister, too, may be requisite, as also active purging; but this last we must not be too hasty in employing, for fear of driving back the eruption.

Subsequent attentions requisite. With these precautions and methods of cure, patients who for a long time seemed in great danger, get well with unexpected rapidity; but, unhappily, measles are a disease too often found to be followed by very bad consequences, and to give trouble and danger when the patient and friends thought the process was happily over. In constitutions tainted with scrofula, we generally find, that measles waken into activity that scourge of our climate; and many date their swelled necks, their diseased eyes, their hopeless consumption, from the time they had the measles. One way to endeavour, at least, to prevent these bad consequences, is to continue our cares for a long time after the patients' seeming recovery, warning them to avoid exposure to cold, to damp, or to the east wind; not to expose the eyes to a bright light, especially of the fire; to avoid much reading or sewing; we are also to give frequent purgative medicines, and to pay attention to the diet of the convalescent. It is a safe and proper practice to give plenty of laxative medicine, whatever we may say of the theory of its carrying off the *dregs* of the measles. At the same time, we are to be aware that debility is a very common and dangerous sequel of the measles; and while the bowels are not neglected, we are to employ all prudent means to strengthen the constitution, by the use of country air, tonic medicines, nourishing diet, and even a little wine.

MECONIUM is the dark coloured stuff, like moistened opium, which is accumulated in great quantities in the bowels of new born infants. They generally begin to evacuate it soon after birth; but if it is retained too long, it is apt to become acrid, and to irritate the tender infant. A little sugar dissolved in water is usually given soon after birth; and this answers the purpose of bringing off the meconium; but if it should not do so within five or six hours, a little manna, or castor oil, or a suppository made of a bit of yellow soap will generally accomplish it.

MEDICATED BATHS. *See* BATH, *page* 59.

MEDICINES are those substances introduced into the stomach, with the intention of producing certain effects, for the cure of disease or the preservation of health. Substances applied externally are more generally termed *applications* or *remedies*. Medicines are obtained from all the various kingdoms of nature, and are used either simply or combined together. Their doses are to be regulated according to the circumstances of

each individual, with respect to age, sex, temperament, strength, peculiarity of constitution, &c. The doses of medicine for children under twelve are to be diminished to $\frac{1}{7}$, $\frac{1}{5}$, $\frac{1}{4}$, $\frac{1}{2}$, at two years, four, six eight, and upwards; from sixteen, in general, the full dose may be given. Some medicines, as calomel, do not make the same impression on children as on adults, and therefore need not be diminished so much. Women in general require smaller doses than men; but of purgative medicines, many require a good deal more. When a person has been accustomed to a medicine, he in general loses his susceptibility of being moved by it; but some cathartics appear to have their action more easily excited by habit; and lead, instead of losing its influence on the constitution by the long continuance of its use, is rendered more active by it. Emetics also become more powerful by repetition. When a person has been weakened by the long duration of a disease, medicines must be ordered in smaller doses than at the commencement of it. Some medicines only act more certainly when given in large doses, but not more violently; this is the case with ipecacuan. Medicines vary in their activity; and this must be taken into the account when a fresh parcel of such medicines is commenced; thus, if we are giving fox-glove, it will be right to begin with a diminished dose of the new portion. The effects of some medicines seem to accumulate in the system; this is remarkable of fox-glove, and sometimes of mercury; we must not therefore always continue to give the medicine till we have some proof of its entering the constitution. Some persons have very remarkable peculiarities with respect to the operation of certain medicines. When this can be known before-hand, we of course avoid the use of these medicines with such patients. The doses of medicines are sometimes influenced by climate. Thus, Indian practitioners give much larger doses of calomel, and other forms of mercury, than could be borne in England: but of sudorific medicines, the dose is less, on account of the constant determination to the surface from the heat of the climate.

MEDICINES, *Times of administering* There are certain times of the day more convenient than others for giving some medicines. Purgative medicines should be given late at night, or early in the morning. The bowels are not so easily acted upon during the time of sleep; and hence pills and other medicines which do not act speedily, have time to dissolve fully, and to produce their due effect on the bowels. Saline purgatives are best given in the morning. Diuretic medicines are best given in the day-time, that the cooler state of the surface may determine their action to the kidneys. Emetics, in slight feverish disorders, are best given in the evening, as they produce tendency to sleep and perspiration, which are best encouraged by retiring to bed. Medicines for perspiration should not be given during the process of digestion.

MEGRIM. A very painful kind of headach, principally on one side of the head, generally above the temple. It is commonly considered as a rheumatic affection, and may proceed from cold, from a spoiled tooth, from the state of the stomach; and is to be treated by attention to the exciting cause, by extracting the tooth, by giving purgative medicines, by promoting perspiration; and in general a small blister is required to be put behind the ear or on the temple.

MELON, *Cucumis melo.* A fruit of the cucumber kind, having a delicious cooling taste; but it is apt to disagree with those stomachs that have not their digestive powers in good order, and requires therefore to be eaten with pepper, ginger, or other aromatics. The seeds are very mucilaginous.

MEMBRANE. An expanded thin substance, lining and covering different parts of the body. Membranes are of various kinds, and are named from the fluid they are supposed to secrete, serous, mucous, &c. The most remarka-

ble serous membranes are, the peritoneum, lining the abdomen and covering the bowels; and the pleura, performing the same offices to the lungs and contents of the chest, &c. Serous membranes are exceedingly prone to inflammation, which commonly terminates in the throwing out of clear lymph, by which contiguous surfaces are glued together; and thus, after inflammations of the lungs and pleura, when the patient has died of another disease, adhesions have been found in various parts within the chest. Mucous membranes are those that line the nose, mouth, stomach and bowels, &c.

MENORRHAGIA. An excessive flow of the monthly discharge in females. *See* MONTHLY DISCHARGE.

MENSTRUATION. The monthly discharge.

MENSTRUUM. A substance having the power of chemically dissolving other substances; applied by the alchymists to those solvents which were supposed to take a month to perform the solution, and now used to signify any solvent.

MENTAL DISEASES. *See* INSANITY.

MERCURY *or* QUICKSILVER. A fluid metal, of great importance in the arts, in chemistry, and in the Materia Medica. It furnishes a variety of medicines of the most active kind, and has been employed with success in a great number of dangerous and frequent diseases. The conspicuous effect of mercury, when introduced into the system, is to increase the flow of saliva; and when this effect is produced, or when the glands which secrete the saliva are evidently affected, we judge the mercury to be pervading the whole system, producing a change on the whole of its fluids, as well as on the nervous and muscular systems.

MERCURY, *Method of introducing.* The modes of introducing mercury into the body, so as to produce its peculiar effect, are various. Like all other metals, it is inert in the metallic state, and requires to undergo various preparations to fit it for acting upon the animal economy. If mercury be thoroughly mixed with conserve of roses, equal parts of each being taken, the globules disappear, and the metal is probably converted into an oxide; and by the addition of a little starch and water, is fit for internal use; it is made up into pills, known by the name of the blue pills, each containing a grain of mercury. These pills are given to the extent of two in the day; or four, two at night and two in the morning, provided they have not too great a purgative effect on the bowels; and if this should take place it must be counteracted by opium. Another way of introducing mercury into the system so as to produce its specific effect, is to give calomel, the submuriate of mercury, preventing its purgative effect either by diminishing the dose, or by combining it with opium. A pill containing two grains of calomel may be given night and morning, till the mouth is affected; or the muriate of mercury, in doses of an eighth of a grain, may be given in solution, or in pill made with crumb of bread. Or a little of the muriate may be rubbed on the inside of the cheek night and morning, till the mercurial effect appears. It is more than suspected, that many of the nostrums which are said to cure some diseases where mercury is useful, without any of that mineral, contain a portion of the muriate; as this, from its activity in a small bulk, is easily disguised. Mercury may also be introduced into the system by rubbing it on the skin. The ointment for this purpose is made by rubbing the mercury with some unctuous body, generally mutton-suet and lard, till the globules disappear, using one part of mercury to four of the fat; and rubbing in upon some convenient part of the body, a piece about the size of a hazel-nut, morning and evening. It is generally directed to be rubbed in upon the inside of the thigh, till it almost completely disappears; and to prevent chafing and eruptions, the hair should be shaved, and one thigh rubbed at the alternate times. It has sometimes been thought of consequence to introduce mercury into the system with great ra-

pidity; and this is done by burning cinnabar, which is a combination of sulphur and mercury, and exposing the patient to receive the vapour, both by the skin and the lungs.

Mercury, *Effects of.* By whatever method mercury is got into the system, its effects are those of a strong and general stimulant; it increases the activity of the circulating system, and brings on a degree of feverishness; it increases the quantity of all the secretions, and especially that of the saliva, producing an evident enlargement of the glands that open into the mouth, and when it has been pushed too far, occasioning very painful swellings and ulcerations of the mouth and fauces. The breath has a peculiar fetid smell, the flow of saliva is exceedingly increased, and a very restless and uncomfortable feeling is produced in the body. Sometimes an eruption takes place on the skin, of a very painful description, for which the greatest attention must be directed to avoid all irritation, to keep the patient in a cool out dry air, to give mild laxative medicines, and to use the sulphuric acid. (*See* Eczema.) In some constitutions, mercury suddenly produces very pernicious effects. There ensue, from a very small quantity of the medicine, great depression of strength, anxiety about the chest, frequent sighing, trembling, a small quick pulse, vomiting, pale countenance, and such debility that a very small exertion of muscular strength is sometimes suddenly fatal. In such cases, all farther administration of the mercury is to be suspended, the patient is to be exposed to a cool and free air; tonic medicines are to be given, with light but nourishing diet; and if the disease for which mercury was given be still going on, it must afterwards be resumed with the utmost caution, that we may judge whether it be safe to go on with it, or to change our plan of cure altogether.

Mercury, *Use of in Syphilis.* So many active medicinal preparations are furnished by mercury, and their combinations are capable of effecting so many different purposes, that there are few diseases in which it may not be employed; but we do not mean here to speak of any of its preparations or effects as purgative, diuretic, diaphoretic, &c. but only of those peculiar to itself, and which are known by their appearances on the salivary glands and their secretions. The most remarkable and celebrated instance in which mercury has been used, has been in the cure of the venereal disease. Very soon after the introduction of this disease, when the nations of Europe were filled with horror at its rapidly destructive progress, several persons afflicted with it, happened at the same time to be using mercury for diseases of the skin, in which complaints it had been employed by the chemical physicians; and finding they were cured of the syphilitic ailments while under the influence of mercury, physicians were induced to try that active mineral for the cure of syphilis, in which it succeeded to their utmost expectation. For above three hundred years, experience has uniformly attested the almost unvarying success with which mercury has been attended in this disease, with the exceptions which may be looked for in every disease and every remedy, from the ever varying peculiarities of the human constitution in different men, and in the same individual at different times. We can truly say, that in the great majority of syphilitic cases, mercury is a safe and certain antidote; although in some constitutions, it cannot be employed, and although in some it may produce effects of an alarming nature.

Profuse Salivation not necessary. Mercury was too often rashly and superfluously employed in the cure of syphilis; such quantities were thrown into the system as to produce the most lamentable effects; in short, it was too often managed so as to become a poison instead of a remedy. A mercurial course, as it was called, was a terrible thing, both in its preparation and its continuance.

and too frequently left the constitution shattered beyond recovery. To procure all the salutary effects of mercury, it is not necessary to throw in so much as to occasion the wasting salivations formerly in use, but merely to keep the mouth tender for the proper period, as an indication that the system is under its influence; and we judge of the length of time during which we are to continue this, by the effects produced on the disease for which we are giving it. The great tenderness of the mouth and of all the neighbouring glands, renders them peculiarly liable to be affected by cold; and it is therefore proper to be on our guard against exposure to cold during a mercurial course, lest the glands should be seized with inflammation and swelling; but this precaution and fear are carried too far by the common people, who are afraid to take a calomel purge lest they should be injured by being exposed to cold. When the mouth is very sore from mercury, with profuse salivation, much ulceration, general fever and irritation, the best treatment is to give saline purges, or castor oil, with a solution of borax as a gargle for the mouth; and if it be deemed advisable to keep the system under the influence of mercury, a little more is to be given when the mouth is beginning to heal, and so continuing it till our purpose is attained.

In diseases of the liver, mercury has been employed; and indeed, in the hardness of that organ, it is the only deobstruent we can depend upon. In dropsy, a course of mercury is frequently an excellent plan of cure. In chronic dysentery, it has been sometimes found advantageous to bring the system under the influence of mercury. In certain obscure and unexplained cases of bad health, what is called an alterative course of medicine is often a good way of inducing a better action in the system; and mercury cautiously given is unquestionably one of the best of alteratives. It has perhaps been too indiscriminately used as such; but in proper cases, and when not pushed too far, it is of essential benefit.

MESENTERY. A doubling of the peritoneum or lining membrane of the abdomen, by which the long convolutions of the small intestines are kept in their place. In the folds of the mesentery, there are numerous glands, which in scrofulous constitutions are apt to become diseased; and as great part of the chyle which is destined for the nourishment of the body passes through those glands when in their healthy state, if by any means they become impervious or diseased, the waste of the body is not supplied, and emaciation and hectic fever take place. *See* MARASMUS.

METASTASIS. The translation or removal of a disease from one part of the body to another, as when the gout suddenly shifts from the toes to the stomach or chest.

METEORISMUS. A dangerous symptom which sometimes comes on suddenly in acute disease, viz. a tense state of the belly from the bowels being distended with flatulence, accompanied with great pain and tendency to inflammation. We are to attempt its relief by stimulating frictions on the abdomen, by giving carminatives that are not likely to heat too much, and by such other treatment as is not pernicious in the original disease.

MEZEREON. *Daphne Mezereon, Spurge Olive.* A plant cultivated in gardens for its flower. The bark of the root has a sweetish taste, and when chewed, it occasions a sensation of burning in the mouth and throat. The bark contains an acrid sap, which irritates the skin. It was formerly used in the Lisbon diet drink, and had some reputation for curing nodes and some other venereal symptoms which had resisted the use of mercury. It is now very little esteemed in medicine. The berries are very acrid, and have produced fatal effects on children who have been tempted by their beauty to eat them. When it is discovered in time that they have done so, an emetic should be given immediately, fol-

lowed by copious diluent and demulcent drinks.

MIASMA. The noxious vapour which arises from putrescent matter, chiefly vegetable, and which has the power of producing disease. *Contagion* is generally applied to that infecting matter which issues from the human body when under the influence of disease. Thus intermittent fevers are known to be produced by marsh *miasmata*, and fevers and hooping-cough by contagion. *See* MALARIA.

MIDRIFF. *See* DIAPHRAGM.

MILIARY FEVER. A fever accompanied by great debility, perspiration, and a copious eruption of little white pustules like millet-seed. It was believed to occur very frequently to women in childbed, and to be one of the diseases that proved most fatal in that state. Since the absurd heating plan of management has been exploded, we hear but little of miliary fever; and it is now universally considered as by no means entitled to consideration as a separate and distinct disease, but to be entirely the consequence of profuse perspiration, and easily prevented by abstaining from such measures as bring out too long continued or copious a sweat. By carefully regulating the temperature, and pursuing the proper measures for women in the childbed state, by giving mild diluent and cooling drinks, and not overloading the patient with bedclothes, by giving bark and other tonics unless circumstances forbid their use, all anxiety about miliary fever may be dismissed.

MILK. The fluid secreted in the breasts of females for the nourishment of their young. That of the cow being furnished in greatest abundance, is of much importance as an article of diet. By boiling milk, its albuminous part is not coagulated into a mass like the white of an egg, on account of the larger quantity of water through which it is diffused; but a thin film rises to the surface, which, if removed, is replaced by another, and if this be continued, the whole of the albumen will be removed. This renders the milk less nutritive, but more easily digestible; and hence many delicate stomachs can take boiled milk, who could not take it in its natural state. As milk is sufficiently nourishing, and holds a just medium between the spare nutriment of vegetables and the stimulant nature of animal food, it is directed with great benefit to patients labouring under various diseases. One of those in which we find it advisable to direct a milk diet most frequently, is consumption, as nourishment enough is supplied by it to the body without any tendency to increase the inflammatory diathesis, which we so much dread in this disease. When consumption is further advanced, the milk of the ass has been considered not only as nutritive but medicinal; and, in conjunction with other observances, should be directed, when there is the means of procuring it in sufficient quantity. With respect to milk, considered as the food designed by nature for the early periods of infancy; in general, the milk of most parents agrees well with their offspring, but in some cases, it proves too purgative, or too flatulent, and the child is not properly nourished. In some cases, it may be necessary for the woman to desist from suckling her child, or to make a complete alteration in her diet, manner of living, and place of abode; by which the milk may perhaps become more congenial to the stomach of the child. Human milk is of easy digestion, light, and very nutritious, requiring little labour from the stomach, and easily convertible into chyle. It contains a larger proportion than other milks, of the fat or buttery part; and having less of the curdy or cheesy part, it is more digestible.

MILK-BLOTCHES. This is a white or dusky scabby eruption, principally on the brow, or some part of the head and face, sometimes appearing in distinct patches, at other times spreading in one continued crust. These scabs are always superficial, and they do not leave any scar. Though they continue long, they are attended with no fever nor derangement of the system. They chiefly occur

in gross infants, and are thought to arise from too rich milk. The diet of the nurse is therefore to be regulated, and she is to abstain from much animal food, and from malt liquors.

Treatment. Though the appearance of the eruption is by no means agreeable, it is seldom necessary or prudent to interfere. Some evil might arise from its being suddenly checked; and it is useful to give some laxative medicine before applying any astringent or cooling wash, which may sometimes be necessary where there is great itching. At a later period of the infant's age, about the time of teething, there occurs an eruption similar to the above; but more obstinate and troublesome, from the heat, itching, and irritation that attend it. Greasy applications are bad for this eruption. Purgative medicines are to be used. It may be necessary to detach the scabs by poultices of barley-meal, or bread and milk, and then to wash with tar-water, or the acetate of ammonia diluted with four parts of water.

MILK-FEVER. A feverish state of the system which occurs during the first days of childbed, occasioned by the rapid determination of blood to the breasts, and the change of its course from the lower parts of the uterine system. It is not to be considered as a disease, unless its violence be extreme; and indeed we rather expect some indications of the new action going on in the system, about the second day after delivery, and from that to the fourth or fifth. It may require to be moderated by a gentle laxative, by putting the child to the breast, and by giving antimonial medicines; avoiding all fatigue of body or anxiety of mind, and giving the woman as little fluid as possible. The symptoms of milk-fever generally terminate after twenty-four or thirty-six hours, by a copious sweat having a sour smell, by a gentle looseness, or an abundant flow of milk from the breasts. Any cold or stimulating substances applied to the breasts to prevent altogether the formation of milk, and the accompanying feverish symptoms, are likely to be attended with the most injurious effects, as inflammation of the lungs or of the brain. It is proper to rub the breasts gently with a little warm sweet oil, and to keep them covered by rags soaked with some simple liniment. The distension is greatly relieved by rendering the passages for the milk clear, by drawing off a spoonful or two; but strong drawing or emptying of the breasts by an adult sucking, or by mechanical means, may induce inflammation and all its troublesome consequences. *See* BREASTS.

MINERAL WATERS. Those waters which, by running over certain soluble substances in their course, become impregnated with the taste, smell, and other properties of these substances, and therefore are of service in the cure of diseases, or in the regulation of the health. The most celebrated waters are those of the following classes; cold, hot, sulphureous, chalybeate, saline and purgative. The places of most note where such waters are found, are Aix, Barege, Bath, Bristol, Buxton, Cheltenham, Carlsbad, Epsom, Harrowgate, Hartfell, Holywell, Malvern, Matlock, Moffat, Pitkeathly, Pyrmont, Scarborough, Spa, Seidlitz, Seltzer, Tunbridge, Strathspeffer The principal of these places are mentioned under their respective names, with the particular kind of water found at each place, and the diseases in which they are found most useful; but it may be proper here to mention some particulars which are common to all, and to detail some reasons why mineral waters are so often recommended by physicians. The diseases in which mineral waters are directed, are chiefly those which are well known by the name of *nervous;* and they generally occur in those who are of a superior rank in life, who alone have it in their power to go to watering places. Their complaints generally arise from the want of active and interesting employment, from deficiency of exercise, and from indulgence in easy and luxurious living. Placed by their fortune above the need of bodily or

mental labour, and in early life having had ample means of sensual or boisterous enjoyment, they have acquired no taste for the cheap and easy enjoyments of learning and virtue; and are therefore fain to indulge in the pleasures of the table, to wear away the tedious hours for which they cannot find a proper use. Hence arise indigestion, flatulence, costiveness, obesity, gout, hypochondriasis, and all the uncomfortable and alarming feelings which originate from such affections. When such patients are sent to a watering-place, they are benefited in a variety of ways. Their usual indolent habits are broken in upon, they see other scenery, the unhealthy air of the town is exchanged for the pure air of the country; they must make some personal exertion, were it merely to walk to the spot where the water is drawn; and however powerful money may be, there are many of their former accommodations which they cannot procure in their new abode. Add to this, that the physical effects of various waters are of the most salutary kind, promoting the regular discharge from the bowels, strengthening the stomach by their coldness or their chalybeate properties; or even in some cases, a nausea or disgust at food is created, which prevents patients from taking in more than the stomach can digest, and thus gives that important but over wrought organ time to recover the tone and activity it had lost.

MINT, *Mentha piperita, Spearmint.* A fragrant plant, which, on account of its agreeable flavour, is sometimes used for culinary purposes. There is an essential oil, and a distilled water obtained from mint, which are sometimes used to flavour medicines.

MISCARRIAGE. *See* ABORTION.

MIXTURE. A combination of medicines in a liquid form, or when solid substances are diffused through liquids by means of mucilage or syrup. Powders may be given in mixtures, when they do not act chemically on each other. They should not run together in masses, but should be divisible and miscible with the fluid; they must not be too heavy, nor must they render the vehicle too viscid and thick. The appearance, the taste, and the smell, should be made as agreeable as possible; hence the infusion of roses, turmeric, lavender, and aromatic and essential oils, when they are harmless, and do not interfere with the purposes for which the mixture is intended, may be added to give an elegant colour and smell to the whole. The dose of mixtures is generally directed by tea or table-spoonfuls, or a wine-glassful. This, though not very accurate, does not lead to any error in medicines that are given in mixtures; but for more preciseness, active medicines should be accurately measured in proper graduated vessels, and given in the form of draughts. Liquid medicines are generally given of the temperature of the air, but in some cases, they sit easier on the stomach when given tepid.

MOFFAT WATER. A cold sulphureous water obtained at Moffat, a village in the south of Scotland. When drawn, the water is milky, and has a smell similar to that of Harrowgate. It contains muriate of soda, carbonic acid gas, azote, and sulphuretted hydrogen. The principal effect of Moffat water is to increase the flow of urine; and it does not purge, unless taken in very large quantities. It is chiefly useful in cutaneous eruptions, in irritable ulcers, and in scrofula in its early stage, when used externally, and somewhat heated; it is also recommended in some stomach complaints, and disorders of the alimentary canal.

MOLE. A mark on the skin, generally brown, sometimes very large, and covered with long hairs. Moles are commonly on the subject at birth, but instances have been seen of their growing suddenly. However disfiguring they may sometimes be, it is dangerous to meddle with them; as they are apt, when much irritated, to become the source of a very destructive ulceration of the skin and neighbouring parts.

MOLE. A false conception, or a shapeless mass in the uterus, without a placenta. In many cases, what is styled a mole, is merely a clot of blood. The proper use of the term should be restricted to signify those irregular productions which are the consequences of conception. When hastily viewed, moles have the appearance of a shapeless mass, but when examined more closely, various parts of a child may be discovered, as also something like a placenta and umbilical cord. "The signs of a mole are, in general, the same as pregnancy. It is said, indeed, that in the former case the belly increases more rapidly than in pregnancy, and after the third month, it generally produces floodings. Women of experience, however, always feel some variety in their symptoms and sensations, and generally suppose they are not with child. A mole is also distinguished from pregnancy by its exciting no motions in the womb like those of a living child, and by changing its situation in the belly according to the posture of the mother. The general health is commonly worse after the fourth month, while in pregnancy it improves. Should the existence of a mole be ascertained, assistance is necessary; the finger may be gradually introduced into the uterus, and its action excited by a slight irritation. As there is no placenta, so if after the discharge of the mole, the flooding ceases, the whole is at an end, except another may remain, (a circumstance peculiarly rare) which however will soon follow. See La Motte, Smellie, and Hamilton." (PARR'S *Medical Dictionary.)*

MOLLITIES OSSIUM. A softening of the bones. *See* BONES.

MONSTERS. The offspring of animals when there is any remarkable deviation from the natural and usual structure. Such deviation may consist in there being a redundance of parts, as when there are two heads, or four arms, or more fingers and toes than usual; or there may be some parts awanting, or parts out of their usual situation, or the bodies of two children, at least the greater part of them, may be growing together. We are quite ignorant of any circumstance that can be considered as the cause of monsters being produced. We are perfectly certain that no voluntary effort on the part of the mother, no exercise of her imagination, can have the smallest effect in this way; and in spite of the strange stories apparently well authenticated, in spite of the remarkable coincidences that have unquestionably occurred, we are compelled to acknowledge the deep obscurity in which the subject is involved. The longings of pregnant women, or the accidents and injuries to which they have been exposed, were believed to have much influence in the production of monsters; but hardly in a single instance has the mother been able to say beforehand what blemish or monstrosity she expects; and it is not till after birth, and till she has been told what is wrong, that she sets herself to recollect the accidents and imaginations that occurred during pregnancy, and with credulity and superstition to account for the monstrous appearances. Since we see by experience the possibility of monstrous births, we may wonder that there are so few of them; and must admire the wisdom and goodness of Providence, which not only regulates the proportion between the numbers of the two sexes, but takes care, that among the countless millions which are born into the world, a monstrous birth is as wonderful for its rarity as for its unnatural appearance.

MONTHLY DISCHARGE, called also the COURSES, MENSTRUATION, or the MENSES. The regularity, permanence, and universality of this discharge from the uterus of the human female, is certainly one of the most curious facts in physiology and natural history. It occurs in the female of none of the inferior animals, and in no climate of the globe is the human race exempt from it. It commences at different ages, according to the heat of the climate, being earliest in the warmer regions. In our climate, and in the more

temperate regions, it begins about the age of fourteen, at which time also the breasts begin to form, and the whole appearance of the person is more interesting and mature. The discharge continues each month for a few days at once, and the average quantity is about four or six ounces. This discharge returns with great regularity for many years, till about the age of from forty-two to forty-six. With some the period is shorter, being every three weeks. There are some women who do not menstruate at all, and such universally are barren. Menstruation, therefore, seems necessary to the capability of conception. Menstruation is suspended during pregnancy, and for some time after delivery, while the woman is giving suck; but if the nursing be continued too long, the discharge returns, and the milk is less fit for the nourishment of the child, or it ceases altogether. Some women menstruate easily, without any particular change or inconvenience, but in most women there is some irritation of the whole system, or the stomach and bowels are affected; and costiveness and flatulence, or spasmodic pains occur, before and at the time of menstruation. It is proper to avoid the exhibition of all medicines, particularly those of any activity, during the flow of the menses; and the sex, in general, have a prejudice against taking medicine at that period; but in cases of alarm or danger it may be necessary to depart from the general rule, and this may be done without much injury. It is proper for women to avoid every thing that disagrees with the stomach, or that is indigestible; they should avoid also exposure to cold, violent exercise, as also strong or sudden mental emotions; as all these circumstances are apt to produce bad effects, either deranging or stopping the menstrual discharge, or occasioning menorrhagia, or much pain and spasmodic action.

I. *Non-appearance of the* MENSES. We have briefly described the natural and healthy state of menstruation, but the function is liable to irregularity and derangement of various kinds. It may be too long of appearing, it may be suddenly checked, it may be too scanty or too copious, or it may be accompanied with much pain and suffering. Though the general period of the commencement of menstruation is about fourteen, it may, from particular circumstances, and in certain constitutions, not make its appearance for some time after that period. Provided the health does not suffer, there is in reality no occasion for alarm or anxiety, although the term should be later by a year or two in one girl than in another; but it is difficult to persuade women themselves of this, and they are apt to ascribe every illness or uneasy feeling to the non-appearance of this discharge. It sometimes indeed happens, that a very great degree of sickness and loss of health occurs in young women who are long of menstruating; and under the article CHLOROSIS, we have detailed the symptoms and treatment of persons in that situation. The non-appearance also gives rise to cough and various sympathetic affections; so that both the patient herself and her friends and medical attendants, are always very glad when the constitution puts on its healthy action; and they look forward to the establishment of this as affording hope of relief from many ailments that afflict females about that age. Every means, therefore, that is consistent with prudence and propriety, ought to be used to bring on healthy menstruation, when it seems too long delayed. Of those, the best are such as contribute to the general health and vigour of the system, such as bark and wine, iron, and other tonics, cold bathing, gentle exercise, either on horseback, or on foot, &c. The bowels are to be particularly attended to; and strong purgatives are sometimes, by sympathy, very effectual in bringing the uterus into action: of these, none are more beneficial than aloes, and the various pills of which aloes forms a principal ingredient. Symptoms must be palliated as they arise. The cough is to be treated by squill, by

bleeding, or a blister; we are to discriminate as accurately as we can between it and consumption, and apply the proper remedies as before directed. In the treatment of such cases, every practitioner of character and respectability will be aware of the delicacy which such patients are entitled to, and will make his inquiries and give his directions accordingly. When the menses do begin, it may be a year or two before they go on in a proper manner; the interval may be two, three, or four months, the quantity variable; and this, for some time, may consist with good health, and at last, the regular monthly period may be established. Matrons should pay particular attention to the conduct and management of their young friends at this period. Any irregularity which at another time might have passed with impunity, will now be productive of serious consequence, and may lay the foundation of ill health, and give a shock to the constitution from which it will not recover. Wet feet are to be considered as peculiarly dangerous; sometimes they check the discharge altogether, sometimes they give rise to a copious and debilitating flow.

II. *Obstruction of the* Menses. Independent of pregnancy, the menses may be checked or suppressed after their first establishment. The most frequent causes of this obstruction are cold, passions of the mind, or debilitating diseases. We are to endeavour to bring them back by remedies adapted to the occasion, by warm fomentations, purgative medicines, opiates, or tonics; varying our plan according to circumstances, and using means more especially about the time when we may expect the efforts of nature to cooperate with our endeavours. The effects produced by suppression on the constitution are various: in many cases it may give rise to fulness of blood; and relief is sometimes got by a spontaneous or artificial bleeding. When accompanied with great debility, we must follow the tonic plan in obstruction, as we do in non-appearance of the menses.

III. *Immoderate flow of the* Menses. On the other hand, the flow may be too copious; it may continue for a much greater number of days than it ought to do, or its quantity may be excessive. This is a state of menstruation very difficult to cure, and productive of very debilitating effects on the body. The countenance of the woman becomes pale and haggard; there is a dark circle round the eyes, an aversion to motion, and great susceptibility of fatigue on slight exertion. The stomach is out of order, the bowels are slow, the lymphatic system is torpid, and symptoms of threatening dropsy appear. We are to order the patient to observe the utmost quietness, to keep in the horizontal posture; we are to give gentle laxatives, in order to prevent all straining at stool; to direct some mild astringent medicine, as the infusion of rose-leaves with a little sulphuric acid, or the elixir of vitriol. If there be much heat and strength of pulse, we may suppose that there is too great determination of blood to the uterine system, and we shall give great relief by using the lancet. When one period of copious discharge is got over, our care should be to prevent the next from being equally so. This is to be done by avoiding fatigue in the interval, by moderation in diet, by avoiding costiveness, by losing a little blood from the arm, if there be too great fulness or inflammatory tendency in the system, and by a prudent use of sulphuric acid and other astringents. Alum whey is a very useful form of giving astringents. A drachm of alum will curdle a pint of milk; the whey is to be sweetened to render it palatable, and a few ounces to be taken as often as the stomach will bear it.

IV. Dysmenorrhœa. *Difficult Menstruation.* A state of menstruation different from the two former, consists in a very difficult and painful performance of that function. It is to be treated by fomentations of the belly, back, and loins, by giving opiates during the severity of the pain, by avoiding cold, by giving me-

dicines which promote perspiration, and encouraging it by giving diluent drinks, and keeping in bed. If the bowels be affected with colic pains, laxative medicines or clysters are to be administered; and if there be sickness and vomiting, with headach, we are to give tinctures in moderate quantity, with laxative medicines, and opiates during the severity of the pain.

In some cases, instead of a fluid discharge every month, there is formed a membranous substance, which is expelled with great pain, and which, when carelessly looked at, has the appearance of an abortion. It is of great consequence for practitioners to know this, as an innocent and virtuous person might be suspected unjustly. When the uterus has put on this irregular action, it is believed that the woman cannot conceive; but there are some cases that show this not to hold universally. A great variety of medicines have been tried for the cure of this affection, but none are to be depended upon. If curable at all, it is in general by the efforts of the constitution itself. Medicines are to be given to palliate pain, debility, costiveness, or any other urgent symptom.

V. *Cessation of the* MONTHLY DISCHARGE. The time of life at which this discharge ceases, differs in different women, but it usually does so between the age of forty-two and forty-six. The symptoms which occur also vary much; in some it stops at once, without any disorder of the constitution; in others, it returns after uncertain and irregular intervals, and in variable quantity, for months or years, before it finally stops. Though many women, at this period, have a great variety of ailments, these are rather to be considered as indications of a change occurring in the constitution, than as depending altogether on the diminution or absence of the discharge. Those who have not enjoyed regular good health, those who have not borne children, or who have been weakened by frequent miscarriages, generally suffer most at this period of life. To others, again, who, during that part of their lives when menstruation went on regularly, had much pain, or were troubled with nervous disorders, the cessation of the discharge is an era which brings them better health than they ever enjoyed before. If no bad symptom occur at this time, there is no call for any interference by regimen, by evacuations, or any other way; but if there be symptoms of fulness or tendency to feverish complaints; if there be headach, flushings of the face, or of the palms of the hands, with restlessness in the night, pains in the loins or belly, or eruptions on different parts of the body; such fulness must be brought down by spare living, proper exercise, laxative medicines, and occasional blood-letting, taking care not to give a habit of using this last evacuation.

MORTIFICATION. The death of a portion of the body, while the rest continues alive, often in a sound state. When any part of the body loses all motion, sensibility, and natural heat, and becomes of a brown, livid, or black colour, it is said to be affected with *sphacelus*, that is, complete mortification. As long as any sensibility, motion, and warmth continue, the state of the disorder is termed *gangrene*.

Mortification is the sequel of diseases both of excitement and of debility. In inflammations of the external parts, which terminate in mortification, the process observed is as follows: the pain ceases, the purulent matter becomes acrid and sanious; air-bubbles are set at liberty, collecting in small vesications under the skin, or distending the whole organ by an emphysematous swelling. The blood is coagulated in the vessels of the gangrened part, and the circulation cannot be restored. A slight delirium comes on, followed either by dejection of spirits or calmness of mind; but in each case, attended with a peculiarly wild expression of countenance; though sometimes with a very peculiar expression of serenity, with a blackness under the eyes. The pulse is usually quick, low, and often intermit-

ting. In the earliest stages, deep incisions are attended with a discharge of blood, still florid; but the skin, the muscles, and the cellular membrane, soon melt down into a brownish offensive mass. We conclude that similar processes take place in the internal parts when they become mortified. When this occurs in strangulated hernia, or in inflammation of the bowels, a remission of the violent pain takes place, and the patient and his friends are deluded with the hope of complete relief; but the experienced physician knows the treacherous symptom, and must not deceive them with false hopes. There is a peculiar kind of mortification called *dry gangrene*, where the disease begins in one of the toes, and very often after a person has been paring a corn or toe-nail. It sometimes stops spontaneously, and deprives the patient of some of his toes, or even of his foot and leg, as cleanly as if it had been amputated by a surgical operation: at other times it has been successfully treated by giving large doses of opium.

Causes. The causes of mortification are general or local. Those which affect the general system, are the violent inflammatory fevers, or the jail and hospital fever; as also diseases of debility, as scurvy and dropsy, long continued or intense cold, and some internal changes, which we cannot trace or explain. The local causes of mortification are numerous. Some of them are, burns, excessive cold, the application of caustics, the strangulation of a part, as in hernia, or the tying of tumours; severe contusions, as gun-shot wounds, bad fractures, violent inflammation, urine effused in the cellular substance, pressure on large blood-vessels, by a ligature or by tumours, wounds of large vessels. Long continuance in one posture, as when a person is confined to bed, gives occasion to gangrene of the parts where the bones have least flesh upon them, and which are therefore much exposed to pressure; as the shoulder-blades, the haunch-bones, and the lower part of the spine. The hospital gangrene is produced by some indescribable state of the air in hospitals, jails, and ships. During its prevalence, the smallest scratch or ulcer is apt to turn to a fatal gangrene. In dropsy, which occurs in broken down and debilitated constitutions, if a few punctures be made to let out the effused fluid, these are too apt to run into gangrene, and a prudent surgeon will therefore not risk the experiment; although it is not unusual for spontaneous vesications to form and break on such dropsical limbs, and to go on to gangrene. The local mortifications which happen in old people, are generally owing to ossification of the arteries.

Prognosis. This is generally as bad as possible. When mortification arises from great debility, from ossification of the arteries, or obstructions that we cannot remove, a cure is not to be expected. Internal mortifications are generally beyond the reach of medicine; but as very threatening symptoms have sometimes disappeared, we must attempt all that art can suggest.

Treatment. When inflammation is so violent and strong as to give reason to fear that it will end in mortification, it is a call for us to use with great diligence the means for abating it, which have been already detailed under INFLAMMATION; taking care that we do not continue them too long, lest we add to the debility and exhaustion which are to follow. When the mortification has fairly begun, our remedies must be very different from those which counteract inflammation. We are now to prevent debility by giving cordials, stimulants, and tonics. Of the class of tonics, the most efficacious are bark and wine; and in a great variety of cases, the good effects of the Peruvian bark are very remarkable. The patient's strength is to be supported by nourishing diet, and a proper and even ample allowance of wine, either Sherry or Madeira. Small quantities of opium and calomel combined, may be given at frequent intervals. When the weakness is very great, spirituous liquors may occasionally be required, as also hartshorn, and gin

ger, pepper, and aromatics. We must be careful not to give these remedies when there is much strength of pulse and many inflammatory symptoms remaining. When our remedies are successful, and the mortification is about to cease, a separation takes place at the verge of the sound part, by means of a slight degree of inflammation. But, on the contrary, it very often happens that the disease spreads, and death ensues.

Of Local Applications. Some have advised cold lotions near the verge of the mortified part, to check the further progress of inflammation; but fomentations and emollient poultices are commonly preferred. To the common poultices, in some cases, are added powdered charcoal, or yeast, or beer, to correct the fœtor, and to counteract putrefaction. Stale beer grounds, or port wine, with linseed meal, make a good poultice. Stimulating balsams, hot oils, and the actual cautery, are now disused in the dressing of mortified parts. It is necessary to give vent to putrid matter, and for this purpose pretty deep incisions are required. With a view of allowing dressings to reach the sound part, and to excite inflammation, which commonly takes place at the verge of the mortified part when it does favourably, and separates from the sound, scarifications have been recommended; but they are always attended with risk of increased inflammation, and we never can be sure how much the disease extends below the surface. We may, therefore, be cutting a superficial part, while the evil is extending close to the bone.

When a part is frost-bitten, it is a very dangerous practice to bring it suddenly into a higher temperature; and in winter campaigns of armies, it has been found, that soldiers who have been exposed to intense cold, have not complained of being frost-bitten, till a thaw came on. The proper treatment is by frictions with camphorated spirit of wine.

MOXA. (Japanese.) "A soft, downy substance, prepared from the young leaves of a species of mugwort, *Artemisia Chinensis*. It is used in the following way: A little cone of the moxa is laid upon the part, previously moistened, and set on fire at the top. It burns down with a temperate glowing heat, and produces a dark-coloured spot, the exulceration of which is promoted by applying a little garlic. The ulcer is left to discharge, or is healed up, according to the object in view. The moxa is famous in the East for curing several diseases; and the French are in the habit of using it; but whenever English surgeons wish to produce a slough, they have recourse to caustics in preference to actual fire." (Cooper's *Surgical Dictionary.*)

MUCILAGE. A soft glutinous substance made by dissolving different kinds of gum; or the roots, leaves, or other parts of plants that abound with it. Mucilaginous drinks and mixtures are very useful in disorders of the bowels, and in catarrhs, where our object is to cover any acrid matter, so as to prevent its irritating the parts over which it passes. A solution of gum arabic, an infusion of linseed, or water gruel, are all to be considered as mucilaginous drinks.

MUCUS. A tough, viscid substance. secreted in different cavities of the body, to defend them from the sharpness of their contents. Thus the stomach and intestines are copiously furnished with mucus to defend their delicate internal coats from the great variety of sharp substances which pass through them; and the nose and windpipe are also defended by mucus from the keenness of the external air.

MUMPS. A disease known in Scotland by the name of the *Branks*, and consisting in a feverish attack, with swelling of the large gland below the ear, and of some other glands in the neighbourhood It chiefly affects children, and is contagious; a good many are to be found labouring under it at the same time. The swelling is commonly on both sides of the neck, but sometimes only on one; and from the inflamed gland being just at the place where the lower jaw is articulated, the action of chewing is painful and diffi-

cult. The swellings are pretty large and hard, and for some days the usual feverish symptoms are present. The swelling and fever increase till about the fourth day, when they abate; and in some cases a remarkable translation of the swelling seems to take place, by parts of a similar glandular structure being attacked, as the testicles in males and the breasts in females. The disease is commonly mild, of short duration, and of no danger; requiring merely confinement to the house, some mild purgative, rubbing the swelled parts with a little camphorated oil, and using spoon-meat to save the pain of chewing. Sometimes, in bad constitutions, suppuration and extensive sloughing ensue, requiring poultices, and the use of bark and wine to support the strength; and when the glandular parts above-mentioned become affected, we are to try to bring back the swelling to the neck, by fomentations and poultices to it, and by applying cooling washes to the other parts.

MURIATE OF AMMONIA. *Sal Ammoniac.* A salt of much use as a refrigerant or cooling application in diseases of the inflammatory kind, as burns, contusions, and the like. A drachm of it is to be dissolved in a chopin of water, and kept to the place affected by means of wet cloths.

MURIATE OF LIME. A solution of this salt, prepared according to the directions of the pharmacopœia, is used in scrofulous cases, in the dose of from twenty drops to two drachms in water or syrup.

MURIATIC ACID is generally in a liquid form, having a strong and pungent smell, and a taste very sour and caustic; exposed to the air, it emits white fumes. It is a solution of the muriatic acid gas in water, which deserves attention in a medical point of view, as being employed in fumigation for destroying contagion. It is extricated for this purpose by pouring sulphuric acid on common salt, by which the fumes of muriatic acid are disengaged, and sulphate of soda is formed. Muriatic acid has been successfully administered in typhus and scarlet fever, in the proportion of a drachm to a pint of gruel or barley-water, with sugar or syrup to correct its acidity, and to render it more palatable. This mixture is to be used for common drink; but must not be put into a leaden or pewter vessel or spoon. It is recommended as good against worms, in the dose of from five to twenty drops in a strong infusion of quassia, frequently repeated.

MUSCLES " are the organs which change, regulate, and fix the positions and attitudes of the system, and which are directly or indirectly concerned in all the more conspicuous motions of the solids and fluids. In these numerous and important operations, they exhibit phenomena peculiar to themselves, and which cannot be traced to gravity or impulse, to elasticity or to chemical attraction. They produce their effect, whether it be a state of motion or rest, *by contracting their fibres in consequence of stimulants;* while the stimulants, whether chemical, mechanical, or vital, seem to act through the medium of a nervous energy.

" They are not restricted to any length, breadth, or thickness; to any form, magnitude, or colour; though every one belonging to a pair resembles its fellow They are not found of any one homogeneous substance, but composed of carneous and tendinous fibres, interspersed every where with cellular membrane, and the ramifications of arteries, veins, absorbents, and nerves, all of them alive, and all of them irritable.

" The carneous fibres constitute flesh. They seldom or never appear single, but are collected into small fasciculi, or bundles, that unite to form larger ones; which larger fasciculi being united, form the collections which with their tendinous fibres, &c. we call muscles, and which we distinguish by proper names.

" The carneous fibres are all sensible to stimulants of one kind or another; and being the only parts that contract in obedience to the will, or in consequence of stimulants operating regularly, they con-

stitute the distinguishing character of muscles. As they derive their principal power from a vital source, the change produced upon them by death is sudden and obvious. Hence the muscles that when living could have ruptured their tendons, luxated the bones, or broken them to pieces, can scarcely, when dead, if it were not for their tendons, their cellular membrane, and the ramifications of the sanguiferous and absorbent systems, support their own weight. In the living state, it is obvious, however, that their strength must vary, and in a great measure depend on the nature and degree of the energy communicated. In the voluntary muscles, that energy, to a certain extent, is varied at pleasure. Yet the influence of the will is nothing, compared to the influence of instinct, emotion, and passion, to which the will is frequently subservient. These often affect the whole of the muscles, and through their medium, alter the secretions. It is this connexion between muscular action and the vital powers that explains how our muscular strength is varied by the states of sickness and health; and how our exertions are more or less vigorous and extensive, continued for a longer or a shorter period, and attended with greater or with less fatigue, in proportion as the mind happens to be influenced by the exhilarating or depressing passions.

" Of the ultimate fibres composing a muscle, of their connexion with contiguous fibres, of their form, their structure, and that series of processes occasioning their contraction, much has been said, conjectured, and reasoned; but nothing of importance added to our stock of authentic information." (Dr. Barclay *on Muscular Motions.*)

MUSHROOM. A plant remarkable for the quickness of its growth and decay, for the remarkable bad smell it diffuses when in a state of decay, and for yielding a nutritive article for the table. Care must be taken that those eaten are of the right sort, as there are several funguses resembling them that are highly poisonous. The marks of good esculent mushrooms are the following. " The true mushrooms (*Agaricus campestris,*) are known by their external whiteness, and by being of a pale red within when young, and of a deeper red, or dark, when older; they are at their first appearance of a round figure, and not much larger than a small nut; after they have a little unfolded their membranes, they appear red, full, and close; on the top is a disagreeable softness, equal, and white; the matter within is very white, with short and thick stalks. They grow in fertile ground, and should be gathered for eating as soon after springing up as possible, for they then contain an oily and a saline part, and if they stay long before they are gathered, their salts become more active and hurtful. Another species of mushrooms, is that kind which produces the circular appearances in fields, called fairy rings. Its substance is tough, and consequently it is used only to make catchup, or in powder.

The deleterious effects of eating mushrooms seem to arise from mistaking the species, which, from the similarity of the poisonous to the esculent kinds, is easy. The following are some of the symptoms produced: Sickness, swelling of the stomach or of the belly, restlessness, giddiness, a palpitation of the heart, heartburn, colic, hiccup, diarrhœa, with tenesmus; heat and redness of the skin, swelling of the face; a difficulty of breathing comes on, and the mind is strangely confused; delirium, trembling, watching, fainting, cold sweats, apoplexies, and convulsions, have followed the eating of bad mushrooms. The stomach is to be emptied by twenty or thirty grains of white vitriol dissolved in warm water. Afterwards a large spoonful of vinegar, in a glass of water, should be frequently taken. Purgative medicines and clysters are to be employed. If symptoms of palsy appear, sinapisms or blisters are necessary." (Parr's *Medical Dictionary.*)

MUSK. A very fragrant substance, obtained from an animal of the deer tribe,

which inhabits the inland parts of Asia. Musk had at one time great reputation as an antispasmodic, a stimulant, and cordial; and as such, was employed in various nervous diseases, and in the last stages of typhus fever and other diseases of debility. The dose is from five to ten grains. It may put an end to spasms by its strong and fragrant odour, and furnish a little stimulus, alone or combined with other medicines; but it has no particular virtues worth its high price and the trouble of procuring it genuine; and the physician has so many more powerful drugs to answer the purposes which musk has been thought good for, that he may, without regret, allow the perfumer the entire monopoly of this costly substance.

MUSQUITOES. Small insects which abound in countless multitudes in the East and West Indies, and are particularly annoying, especially to new-comers. They inflict a small wound, which is soon surrounded by a pimple, accompanied by troublesome itching; and in some cases so numerous are those annoying bites, that a degree of general fever is induced. The best application is lemon-juice. It is fortunate that the bites of these insects seem to produce a certain change in the blood, which renders it disagreeable to them afterwards, as those who have occasion to visit warm countries often, are rarely attacked by them with much violence on their second or subsequent voyages. The young and sanguine Europeans are most liable to their attacks.

MUSSEL, *Mytilus edulis.* A shell-fish found in great abundance on our coasts, often used as food. Mussels have, in various cases, been known to produce poisonous effects, of which we have given a remarkable instance in page 269. *See* Fish-Poisons.

MUSTARD, *Sinapis alba.* A plant of the class *Tetradynamia,* growing in Britain, whose seeds when bruised form a powder of a pungent smell and acrid taste; this, when mixed with water, is used as a seasoning with our food, and when taken in considerable quantity it proves an emetic; hence it is often useful in domestic practice, when any poisonous substance has been swallowed. Another useful purpose to which we apply mustard, is to act as a kind of blister, to stimulate the skin for the cure of internal diseases in a manner quick and effectual, without the tedious waiting, and the destruction of the outer skin which follow the application of common blisters. To use it in this way, equal parts of table mustard and crumb of bread may be mixed with vinegar and water, and applied to the place till the patient feels it becoming hot and itchy, which will generally be in about a quarter of an hour or twenty minutes. Mustard poultices are also applied to the feet, to quiet delirium, and remove the tendency of blood to the head, and to act as a stimulant when the powers of life seem much diminished in their energy. Such applications are called *Sinapisms.*

The seeds of the white mustard taken whole, have been long used in a variety of complaints, and some persons have been very sanguine as to their powers in a great many more. They have been given as a stimulant to the stomach, and to the system in general, in cases of palsy. They act as a tonic and mild laxative; probably very much from their mechanical effects, as like other seeds, they pass through the intestines unchanged; only the outer covering being somewhat softened, and parting with a quantity of mucilage. Mustard-seed is certainly very harmless, and may be tried in various diseases of debility and indigestion. It may be taken to the extent of a tea-spoonful three times a-day, in a little milk, gruel, or water. It is to be swallowed whole, and not broken or masticated.

MYRRH. A gum-resin obtained from a plant not yet described. The best myrrh is brought from Abyssinia, but it is also produced on the east coast of Arabia Felix, whence it comes to us by the East Indies. Myrrh is a heating

and stimulant medicine. It sometimes occasions a perspiration, and it is supposed to be beneficial in diseases of the uterine system. It may be given in powder, or made into pills, in doses of from ten to forty grains; or in the form of tincture, in doses of one or two drachms; but it must not be given in water, as it will not continue in solution in that fluid; it should be given in milk or mucilage. The tincture is a good addition to some gargles, and is also a favourite application to the teeth. Myrrh, when combined with aloes, forms a good tonic, as in the pills called pills of aloes with myrrh, of which the dose is from two to four pills taken at bed-time. A mixture with some myrrh in it, called Griffith's Myrrh Mixture, had at one time great reputation in the cure of consumption, but it has not maintained its ground. Some object to it as not founded on chemical principles, but Dr. Paris thinks it affords an instance of a valuable composition of drugs which experience has ascertained to be of great value, though theory would lead us to reject it. He thinks the mistura ferri composita of the London Pharmacopœia is nearly the same as the antihectic mixture of Dr. Griffith, and that it is permanently serviceable in chlorosis, and the numerous sympathetic affections connected with it. In the painful swellings which infest the breasts of chlorotic young women, it has been found almost a specific. The dose is from one to two ounces.

N

NAR

NAPHTHA is a liquid bitumen, or compound inflammable substance. It is a pale yellowish coloured volatile oil, found on the shores of the Caspian Sea and in Persia. It has a pungent disagreeable smell. When air is present, it burns with a white flame, giving out much smoke. Its component parts are carbon and hydrogen, and as it contains no oxygen, it is useful for keeping the metallic bases of the alkalis. (Fyfe's *Chemistry.*)

NARCOTIC MEDICINES are those which have the property of diminishing the action of the nervous and vascular systems, and of inducing sleep. These medicines are also called sedatives, anodynes, and soporifics. They appear to act by first exciting the energy of the nervous and vascular systems, and this excitement is followed by a degree of collapse altogether disproportioned to the excitement. This depression is so rapid, that the previous excitement is not perceived, and hence many physicians regard certain substances as direct sedatives. The principal substances possessed of narcotic properties are opium, hyoscyamus, (henbane,) belladonna, camphor, hemlock, foxglove, stramonium. Each of these substances seems to have some peculiar manner of operation; and when one narcotic fails, another will often induce sleep. *See* Opium, Henbane, Hemlock, Foxglove, &c.

NAU

NASTURTIUM. The Latin name for cresses. There are three kinds used, water cresses, garden cresses, and Indian cresses. These plants form an excellent pungent salad, good as a seasoner of food, and good for curing or preventing sea scurvy, when it can be had in sufficient quantity. The Indian cress is the *Tropæolum majus*, whose showy and elegant appearance occasions it to be much cultivated as an ornament for arbours and gardens. It is often called, in common discourse, the *nasturtium*.

NAUSEA. Sickness and inclination to vomit, so called from its identity with the feeling occasioned by sailing in a ship

or boat. The lowest degree of this affection is called loathing. This proceeds to nausea, retching, and vomiting. Nausea is accompanied with a quivering motion of the lips, and often with a discharge of clear mucus from the mouth or gullet. Nausea is occasioned by various circumstances not connected with the stomach, as by emotions of the mind, injuries of the brain, or inflammation in the kidneys. It is a common symptom of fevers, during a great part of their course. It is to be removed by curing the original disease; but relief is often obtained by the use of the effervescing draughts, by an opiate, or by bitters.

In some affections, it is useful to introduce nausea without going the length of full vomiting. This is accomplished by diminishing the doses of emetics usually given, and administering those smaller doses at lengthened intervals. One of the most manageable substances for this purpose is antimony, in the form of tartar emetic, of which two grains are dissolved in six ounces of water; and of this solution, a tea-spoonful is given every two hours, which induces a degree of nausea, and consequently diminution of the action of the vascular system, highly desirable in febrile complaints, whether simple fever, or fever accompanied by inflammation. In strangulated hernia, we induce nausea and the consequent relaxation which we consider as necessary to relieve the patient, by the use of tobacco clysters, made by infusing for ten minutes a drachm of tobacco leaves in a pint of boiling water; and of this infusion we throw up about a fourth part. It is a remedy of great potency and hazard, and must not be resorted to, unless under the direction of persons of skill and experience.

NAVEL. At this place entered the vessels of the cord by which the communication between the fœtus and the mother was kept up. It is sometimes the seat of rupture, especially in infants who cry much. *See* RUPTURE.

NAVEL-STRING. *See* INFANTS, *Management of.*

NECK. There are a great variety of important parts situated in the neck, which in consequence becomes the seat of a great number of diseases. Swellings of different parts about the neck are very common. In the fore part, there is a gland which is liable to swell, constituting the disease termed goître or bronchocele, of which an account has been already given; and the different kinds of sore throat have also symptomatic swellings in different parts of the neck. Scrofula is a very frequent and troublesome cause of swellings and ulcerations of the neck. The neck sometimes loses its power on one side, by which it is drawn to the opposite, constituting the disease called *wry neck;* the cure of which consists in friction to the weakened muscles, supporting the head in the proper position, and giving such aid as is necessary to the general system. Sometimes the neck is shorter than common, having six instead of seven vertebræ; and this, with other peculiarities of the make, shows a predisposition to apoplexy. *For the treatment of Swelled Neck, see* BRONCHOCELE, SORE THROAT, SCROFULA.

NECROSIS. A very singular disease of the bones, in which a bone or part of a bone dies, and is replaced by a new one. Unless the fact had frequently occurred, we should never have expected that a bone so large as the thigh-bone or shoulder-blade should die, and be replaced by a new growth, and the old one be taken away by absorption, without the feeling or motion of the limb being impaired. The following are the symptoms of necrosis. At its commencement a deep-seated acute pain is felt, which is soon followed by a rapid enlargement of the parts along the course of the bone. An inflammation and one or more abscesses take place, which do not heal, but become fistulous sores. The openings are generally situated over the most superficial part of the bone. These abscesses are situated within the newly formed bony shell, and a probe can seldom be introduced into them, so as to discover any

loose pieces of bone; but sometimes small pieces make their way out through the abscesses. Sometimes the abscesses heal up, and the old bone being absorbed, is never seen, but only a permanent thickening of the part remains. This is the most favourable way for the case to terminate; but at other times, the old bone makes its way through the new bone, and through the skin, with different degrees of inflammation, pain, and suppuration. The old part, called the *sequestrum*, may be moved by shaking it, and in some favourable situations may be easily pulled away; in others, it may be necessary to make an opening to discharge it. The period of life most subject to this disease, is from twelve to eighteen years of age. The bones most liable to necrosis are those of the extremities, the clavicle, the scapula, and the lower jaw. In general, there is no external apparent cause for the disease; but sometimes blows, acrid substances applied to the teeth, and the effects of mercury, give occasion to necrosis of the lower jaw.

NEPHRALGIA *and* NEPHRITIS. Pain or inflammation of the kidney. *See* KIDNEY.

NERVES, *and* NERVOUS SYSTEM. "Nerves are whitish cords, of various thickness, which are found distributed to every part of the system. Every nerve that has yet been discovered in an animal body regularly formed, has proceeded directly or indirectly from a brain, a little brain, or a spinal marrow; the two former are what principally constitute the brain. The nerves distributed to the organs of sense and voluntary motion are, compared to the parts on which they are ramified, proportionally the largest in the whole system. Any of the trunks of the nerves of the arm, are larger than the middle or great sympathetics, that supply the viscera of the thorax and abdomen; and the branches, at the points of the fingers, are larger than those which are seen entering the basis of the heart. All nerves have been divided into those which are sensible or insensible, voluntary or involuntary; the *sensible* being those which obviously and suddenly communicate intelligence to the vital principle, of the injuries or changes that take place in the system, or of the impressions that are made from without; the *insensible*, those which perform their operations obscurely and secretly, unknown to the senses, and without in general awakening our consciousness; the *voluntary*, those which are either subservient, or at least partly subservient, to the will; the *involuntary*, those, whose functions are obvious to the senses, but on which the will has no direct or immediate influence. This division, although it be useful on certain occasions, is far from accurate. The sensible nerves grow often insensible, and the voluntary nerves often involuntary, in consequence of palsy; while insensible nerves, on the other hand, are often observed to become sensible from the diseased state of the parts on which they are ramified. Voluntary nerves, though generally sensible, do not appear to be necessarily so. There are voluntary nerves which are either insensible, or next to insensible, in some insects. When a gadfly has once fixed on the hand and tasted of the blood, its wings, its legs, its antennae, and even abdomen, may be amputated without interrupting, at least apparently, the pleasure which it seems to derive from the suction. Involuntary nerves, although exempted from any direct influence of the will, are seldom exempted from the effects of fear, of anger, or any of the violent mental emotions which affect indiscriminately both the voluntary and involuntary nerves. We see the nerves not immediately subjected to the influence of the will, distinguished not only by a proportionally smaller size, but likewise by certain swellings or knots that are named *ganglions;* and as all these nerves are subservient to functions that are constant and uniform, it has been supposed that their ganglions are both reservoirs and sources of the nervous energy; and that by affording a regular supply, and resisting those occasional

commotions excited by volition, they are calculated to preserve that uniformity in point of function by which the involuntary nerves are distinguished.

"Nerves also form *plexuses* or networks, whose use is less obscure than that of the ganglions. In the large plexuses formed by the nerves of the superior and inferior extremities, we see a number of communicating branches passing between one trunk and another; and which, like the inosculating branches of blood-vessels, contribute to secure a more regular supply of that sort of energy which nerves convey to the different parts on which they are ramified. Physiologists are accustomed to trace particular connexions among the organs that, distant or near, derive their nerves, not merely from the same ganglions or plexuses, but the same trunks, or the contiguous corresponding parts of the brain and its prolongation. It is thus they explain the sympathy between the eyes and the nose, when a strong light impinges on the one, or a pungent odour is applied to the other." (Dr. Barclay.) *See* Sympathy.

The accurate researches of modern anatomists have made considerable additions to our knowledge of the nerves. It has been discovered, that what is commonly called a nerve, may contain in one sheath nervous filaments possessed of very different properties, some conveying sensation from the external world or the surface of the body, to the brain; others transmitting muscular motion by volition, to the external organs. Thus, in a part of the body, as the face, the sensation may be entire, while the muscles are paralyzed, or the reverse may take place, the motions being perfect, but the sensibility gone. Hence many anomalous symptoms are explained; and paralytic affections which were formerly thought to indicate great derangement of the brain, are now easily traced to a tumour pressing upon a particular nerve; and very bad symptoms disappear from the spontaneous cure of the tumour, or by an easy surgical operation.

NERVOUS. In this article we are to be considered rather as explaining a term which is in popular use, than as speaking in correct medical language. When a person is said to be *nervous*, it means that his sensibility is too acute, and the mobility of his moving fibres is increased. Hysterical patients exhibit a strongly marked example of this nervous constitution; but there are many of both sexes who approach it without coming the length of hysteria, or any decided disease. In such, the pulse is unusually rapid from the slightest excitement; the heart palpitates, the face is flushed, while the extremities are cold, and a sensation is felt as of cold water pouring down the back. The breathing is irregular, there is panting and sighing, and occasionally death-like faintness occurs. The impressions made on the senses by surrounding objects, though indifferent or agreeable to others, are irritating and offensive to them. The muscles often contract, independent of the will, and sometimes epilepsy seizes them. The appetite of the nervous is capricious, irregular, and depraved; the stomach and bowels often distended with flatulence, and the urine irregularly secreted. "These symptoms recur at irregular intervals, and sometimes vanish spontaneously, leaving the usual delicacy of infirm health, but no particular inconvenience. They are induced and carried off by causes equally slight, and leave the patient subject to the charge of caprice, fancy, or dissimulation. Thus they are brought on by a sharp noise, a fetid odour, a disagreeable object, and carried off by similar means. Nervous patients, in this way, suffer acutely with little commiseration, and few attempts at relief. They are told that they must be their own physicians; and are left to the pity, often to the ridicule of the world. Yet though not diseased, they nearly approach disease."

Nervous Patients, *Treatment of.* They should keep their bodies in an equable warmth, and by friction or by exercise, prevent the feet from being cold. As a

very little exercise fatigues them, it must be taken with caution. A journey and a change of scene are useful. Laxative medicines are highly proper, especially those made with aloes and rhubarb, combined with asafetida or myrrh. "Too great sensibility is blunted by various narcotics and carminatives, and by every stimulus. It is painful to be obliged to add, that what was first resorted to as a medicine, is often continued from habit, and the officinal tincture is exchanged for common spirits. Let therefore every nervous female be cautious in this respect, for thousands have been thus incautiously enticed to their ruin; the ruin of their constitution and of their moral character. Let them recollect that aqua ammoniæ is less dangerous than brandy, and that infusions of peppermint, of rosemary, or the warmer aromatics of the east, though injurious in excess, are far less so than what are styled indirect stimulants, which lull, rather than relieve pain; which intoxicate the senses, rather than remove the disease. In such cases, for this purpose, opium is often a useful remedy, but it should be confined to medical exhibition. In excess it acts only as a dram; and we fear, like spirit of lavender, is often used as such, under the name of medicine." (Dr. Parr.)

The management of the mind of nervous patients requires a delicate but steady hand. They should not be ridiculed, nor treated with harshness and insensibility. They should, for a time at least, be indulged in trifles, but regulated when they show a tendency to any hurtful extravagance of conduct. Their errors, and the consequences of them, should be pointed out with mildness and affection; and their treatment, from those around them, should be varied according to the circumstances, temper, and habit of the patient.

NERVOUS DISEASES. In Dr. Cullen's arrangement of diseases, he gives the title of *nervous* to all those preternatural affections of sense or motion which are without fever as a part of the primary disease, and which do not depend on any local affection of particular organs, but upon a more general affection of the nervous system. Under nervous diseases, are comprehended apoplexy, palsy, epilepsy, tetanus, St. Vitus's dance, colic, looseness, hysteria, asthma, hooping-cough, mental diseases, &c.

NERVOUS FEVER, is one of the many names which have been given to the common Continued Fever, called by medical writers *synochus* or *typhus*. *See* Fever.

NETTLE-RASH. An eruption which takes place in various parts of the body, accompanied by a raising of the skin in what are called wheals, having a white top, and often surrounded by redness of the other parts of the skin. Some kinds of the nettle-rash are introduced by feverish symptoms continuing for a day or two, with headach, pain and sickness at stomach, with languor, anxiety, drowsiness, and sometimes fainting. The eruption is sometimes accompanied with a great degree of itching, especially during the night. The patches are often elevated and hard; and when numerous, occasion the face or limb to appear tense and enlarged. The nettle-rash continues about a week, and the stomach is relieved when the eruption comes out, but is apt to be again disordered, if the eruption be checked. The nettle-rash occurs principally in warm weather; and in children, is often connected with teething, and disordered bowels; and among grown up persons, it affects those of a full habit, and who indulge at the table. In some constitutions, various articles of food give occasion to the nettle-rash, especially shell-fish, as lobsters, crabs, and mussels. In some peculiarities of constitution, various substances taken into the stomach, very speedily, almost instantaneously, produce the nettle-rash, though by the generality of people they may be eaten without injury. Among these substances, are the kernels or seeds of fruits, as of apples, almonds, raspberries, strawberries, mushrooms; honey, porter.

Treatment. The nettle-rash is to be treated by exhibiting an emetic of ipecacuan, and giving a laxative medicine afterwards. The diet is to be light and cooling; all fermented liquors are to be avoided. When the disease is on the decline, bark and sulphuric acid are useful.

NEUTRAL SALTS. Those salts formed by the union of an acid and an alkali, in which neither the properties of the one nor of the other predominate, but a substance is formed quite distinct from both. The neutral salts furnish some very useful articles in medicine, chiefly purgatives and diuretics; the principal are the sulphate of soda, the acetate of potash, the tartrate of potash and soda, the phosphate of soda, the nitrate of potash; and in this view we may also add the sulphate of magnesia, though in very strict chemical language it is an earthy neutral salt. For the properties, uses, and doses of the neutral salts, see under their respective names.

NICE, and VILLA FRANCA, a village seven miles from Nice, are continental situations for consumptive patients, which appear to have numerous advocates at present; particularly Villa Franca. It is more sheltered than Nice from the cold north wind, which, coming down the valley of the Paglia, is often felt with considerable severity during the winter and spring months. In both these situations the climate is dry, and remarkably steady during the winter; but in spring, there are very cold winds, sweeping over the Alps and Appennines, which are covered with snow. The inhabitants of Nice are said to be extremely liable to catarrhal affections; and pulmonary consumption is by no means unfrequent. Upon the whole, there is much diversity of opinion as to the salubrity of Nice, as a residence for consumptive patients. Dr. Clark, who resided for some time at Rome, and who wrote on the climate, &c. of France, Italy, and Switzerland, and on the effects of residence in the south of Europe in consumptive cases, is decidedly unfavourable to Nice; and in corroboration of his own opinion, he gives that of Professor Foderé of Strasburg, who had resided six years at Nice. This distinguished physician considers Nice as an improper residence for consumptive patients; and concluded a conversation with Dr. Clark on the subject, by saying, "One thing is certain, Sir, you may safely assure your countrymen, that it is a very bad practice to send their consumptive patients to die at Nice." Villa Franca, we have stated, is much more sheltered than Nice; and by many who have good opportunities for judging, this spot is considered to afford the best winter climate in Europe. (DR. ABERCROMBIE.)

NIGHT-AIR. Many diseases are brought on by imprudent exposure of the body to the night-air; and this, at all seasons, in every climate, and variety of temperature. The causes of this bad property of the night-air, it is not difficult to assign. The heat is almost universally several degrees lower than in the daytime; the air deposits dew and other moistures; the pores of the body are open, from the exercise and fatigues of the day; the evening feverishness leaves the body in some degree debilitated and susceptible of external impressions; and from all these concurrent causes, are produced the various effects of cold acting as a check to perspiration; such as catarrhs, sore throats, coughs, consumptions, rheumatisms, asthmas, fevers and dysenteries. In warm climates, the night-air and night-dews, with their tainted impregnations, act with much malignancy on the unwary European, who too often, after an imprudent debauch, still more absurdly lays himself down in the woods or verandahs, to receive the full attacks of the morbific powers then unusually active. In civilized life, and in crowded towns, how many fall victims to their own imprudence, in exposing themselves to the cold, the damp, and the frostiness of the night-air. Issuing from warm apartments with blazing fires, or from crowded churches, theatres, or ball-rooms, with exhausted strength, profuse perspiration,

thin dresses, and much of the person uncovered, how many are arrested with the benumbing cold and the universal shivering, which prove the forerunners of dangerous inflammation of the brain, of the lungs, or of the bowels, which either cut them off in a few days, or lay the foundation of consumption or other lingering illnesses. Such being the dangers of exposure to the night-air, it ought to be inculcated on all, both young and old, to guard against them, by avoiding all rash and hasty changes of place and temperature, by hardening the frame by due exercise and walking in the open air in the day-time; and on occasions where the night-air must be braved, taking care to be sufficiently clothed; and to avoid drawing in the cold air too strong or hastily with the mouth open.

NIGHTMARE. A certain uneasy feeling during sleep, as of great anxiety and difficulty of breathing, and of strong but ineffectual efforts to shake off some incumbent pressure, or to relieve one's-self from great inconvenience. The imagination is generally at work to find some cause for the unpleasant feeling, and pictures some monstrous shape as the author of the mischief. It commonly arises from an imperfect and unhealthy digestion, from flatulence, from heavy suppers, and from a constrained uneasy posture of the body. Such persons as are subject to nightmare should not take supper, should pay attention to the state of their bowels, and should sleep with the head and shoulders raised.

NIPPLES. Women who are nursing are very subject to excoriation and chopping about the nipples, and the pain is often so severe when the infant is put to the breast, that it is with great difficulty they can continue to nurse. Something may be done before delivery to prevent this coming on, by a frequent use of astringent washes, as brandy, tincture of myrrh, or infusion of oak-bark; and when it has come on, the same washes are to be applied; or a solution of white vitriol in rose-water, taking care to wash off with a little milk and water, any foreign substance before the child begins to suck. Sometimes great pain is occasioned by the child capriciously or playfully, seizing the nipple often, and letting it go again. This is said to be prevented by sprinkling on the nipple, when the child has done sucking, equal parts of powdered gum arabic and sugar-candy. The sweetness induces him to keep his hold; and the powder absorbs the sharp fluid which comes from the clefts, and also defends the part. In some cases, it may be necessary to suspend nursing for a short time, till the chops and excoriations are healed, drawing off the milk by nipple-glasses contrived for the purpose. Or the child may be made to suck through a cow's teat, properly prepared and adapted to the nipple of the mother. Some women have very small nipples, and such as scarcely project from the breast; and it is extremely difficult for a first child, especially if it be weakly, to perform the function of sucking. In such cases, the nipple is to be drawn out by the suction of an elder child, or of some adult who is capable of doing it; but if much violence be used in this way, inflammation may be induced. By perseverance, some unlikely nipples will be so formed as easily to nourish the child.

NITRATES are those salts formed by the combination of the nitric acid with a base. The nitrates most used in medicine are the nitrate of potash, commonly called nitre, or saltpetre, and the nitrate of silver or lunar caustic.

NITRATE OF POTASH, NITRE, or SALTPETRE. A salt of a cooling, refrigerant, and diuretic quality. It forms a very safe and excellent addition to drinks in feverish cases, in the dose of twenty to thirty grains to the pint of water; or it may be a little increased, and so given as a diuretic, dissolved in a considerable quantity of water. Or it may be given in doses of three or four grains four times a-day, and assisted by large draughts of toast-water, or barley-water, linseed-tea, and the like. Sometimes an ounce

or more of this salt has been given by mistake for some purgative salt, and the effects have been very dreadful. Severe griping, bloody stools, vomiting, and death have ensued. The best way to counteract this, is to give carbonate of soda in large quantities of fat mutton broth, or to give a dose of castor oil, followed up by copious draughts of gruel. Opium and aromatics are also to be given.

NITRATE OF SILVER *or* LUNAR CAUSTIC, is formed by dissolving silver in nitric acid, evaporating the solution to the consistence of oil, and then pouring it into iron tubes, greased on their inside with tallow. When the cylinders of nitrate of silver are cooled, they have a dark grey colour, and when broken across, present a crystalline structure. The taste of nitrate of silver is very bitter, harsh, and metallic. It tinges the skin black, and is one of the most active and manageable caustics we possess; it is employed to remove fungous growths, the callous edges of sores, strictures in the urethra, and the like. It is employed frequently to tinge the hair black, and it forms the basis of indelible marking ink. A solution of it is applied to indolent ulcers and fistulous sores, and has appeared to do much good in ringworm. It is also used in certain stages of chronic ophthalmia. A strong solution has been injected into the urethra in gonorrhœa, but this is a practice by no means to be followed. The nitrate of silver has been given internally for the cure of epilepsy, but it has not been attended with very remarkable success. The dose, at first, is the eighth of a grain, increased gradually to one grain. Several cases are recorded, where the colour of the skin was altered to a dark hue, by long continuance of its internal use.

NITRIC ACID, or AQUAFORTIS. A strong mineral acid, highly corrosive. When applied to the skin, it gives a yellow stain. It has been used in medicine largely diluted, and with reported good success, in a variety of diseases. In low nervous fever, it may be used to acidulate the drink; and in the liver complaint of the East Indies, and in syphilis, it has been thought capable, by some, of even superseding the use of mercury. Though this is certainly conceiving too high hopes of it, the nitric acid is to be considered as a good auxiliary in the cure of these diseases, taken to the amount of two drachms daily in water, or any other vehicle that may be agreeable to the patient. In some obstinate diseases of the skin, it is used as a vesicatory, to a small portion at a time. The fumes of nitric acid have been employed to destroy febrile contagion, by pouring sulphuric acid on nitrate of potash; the nitric acid is disengaged, and rises in vapour through the apartment. It is thought that the caustic quality of undiluted nitric acid would render it a good means of destroying the poison introduced by the bite of a mad animal.

NITRO-MURIATIC acid, a mixture of two parts of muriatic acid, and one of nitric acid, famous under the name of *aqua regia*, as having the power of dissolving gold. Of late years, a bath of nitro-muriatic acid has been recommended as an alterative, in the hepatic affections so common to those who have resided long in warm climates. The acid should be diluted so as to have nearly the acidity of strong vinegar, and is to be applied to the body by a spunge, or used as a bath to the feet and legs; it generally produces a little heat of skin, thirst, and a peculiar taste in the mouth: the bowels, after a time, become affected, and the headach, the irritability, and pain of the side, gradually give way.

NOCTAMBULISM. Walking in one's sleep. *See* SOMNAMBULISM.

NODE. A hard circumscribed tumour on a bone, occasioned by a swelling of the periosteum, appearing commonly on those bones, which are thinly covered with soft parts, as the forehead, the forearm, and the shin-bone. They are commonly symptomatic of old syphilitic complaints, and when they continue long, they are apt to occasion a caries of the bone. They are to be treated

by mercury; and it is generally necessary to give at the same time decoction of sarsaparilla, and to keep up the strength by nourishing diet, bark and wine.

NOLI-ME-TANGERE, *Touch me not.* A species of disease affecting the skin and cartilages of the nose; very difficult of cure, as most applications seem to make it worse. It generally begins by small ulcerations on the side of the nose, which spread, and sometimes destroy a great part of it. A similar disease has been seen on the pectoral muscle; and in a few cases of long duration, without much inflammation, the internal use of arsenic has seemed to be of some slight advantage.

NOSE, BLEEDING FROM. The inner part of the nose is lined with a very fine and delicate membrane, below and upon which numerous blood-vessels are ramified. This membrane and its delicate vessels are easily broken by any violence, whether that be external, as by a blow, or from too rapid and strong an action of the circulation itself. Hence a bleeding at the nose is so common an occurrence, and takes place so readily from external injury, and from the state of the circulation at various periods of life. When a person is young, and the successive growth and evolution of the various parts of the body is going on, it is very common for bleeding to happen at the nose or lungs; and of the two, that from the nose is incomparably the safest, and when it does take place, it often relieves the system; and when it does not go too far, it is very salutary. A bleeding from the arm might in these circumstances be useful, but people are apt to get into a habit of letting blood from the arm, which is both unnecessary and hurtful. It is better to supersede the necessity for this, by abridging the diet, by using vegetable food, and by taking frequent cooling laxatives. When bleeding from the nose is excessive or long continued, we are to take the proper means to check it. One of the most powerful of these is the application of cold to the face and back, by means of cloths dipped in some cooling lotion, as of vinegar and water, or a solution of sal ammoniac. We are to give the neutral salts; and to solicit a determination of blood elsewhere by tepid bathing to the feet. The patient must endeavour to abstain from blowing the nose, and it may be necessary to introduce a piece of sponge by the back part of the mouth, tied to a piece of thread, by which it is to be brought out at the nostrils, and so to be pushed against the passage from the nose into the mouth. When the bleeding from the nose occurs in plethoric elderly persons, it is to be regarded as one of the strongest warnings of coming apoplexy; and we are to take our precautions accordingly, by general bleeding, by purging, and a spare diet, to lessen the fulness of the system.

NOSOLOGY is the arrangement and classification of diseases. The advantages of a skilful arrangement in botany and some other departments of natural history, have been so obvious, that physicians have been anxious to extend a similar plan to the science and practice of medicine. But the metaphysical and abstract nature of the objects of their attention, presents great and insuperable obstacles to the completion of any such plan. Animals, minerals, and vegetables are tangible and visible objects, which possess a uniformity of properties sufficient for the purposes of classification; but *fever, dropsy, or apoplexy*, are mere conventional terms for a certain train or assemblage of actions in a living body, which may vary in every individual in whom they occur. Yet nosology is of great utility; always in the study, often in the practice of physic. Many diseases are evidently related together, and essentially different from others. Fevers and inflammation present different symptoms, and require different treatment, from spasmodic diseases, or passive hæmorrhagies. The great advantage of nosology is, that it requires attentive observation, and leads to accurate distinction of disease.

But in actual practice, the enlightened physician, while he takes the help which artificial arrangement gives him, will never be led away by the name of a disease, but be guided in every case by its own attending symptoms.

NOSTALGIA. *See* HOME SICKNESS.

NOSTRUM. A medicine prepared by a secret process, and sold for the private advantage of an individual. Such medicines may sometimes be effectual, but in general their pretensions are far too pompous.

NURSES, HIRED, QUALIFICATIONS OF. In very many cases, a woman is unable to nurse her own child, from deficiency of milk, from weakness, or other circumstances; and many women in the higher ranks of life decline the task from a dislike of the drudgery. In these cases, it becomes necessary to bring up the child with the spoon, or to hire a woman who is nursing. It is a difficult matter to bring up a child without suckling it, and therefore the qualifications of a hired nurse are of great consequence. She should not be too young or inexperienced, she should be of a healthy appearance, with good teeth, without any disease or weakness of the eyes; her milk should be plentiful, and her own child, when it can be seen, should be ascertained to be thriving, and to have been nourished chiefly by its mother's milk. The milk should not be too old, as compared with the child she is to suckle; it is wrong to give a new born infant to be suckled on milk ten or twelve months old. Nurses should be of a cheerful temper and pleasant countenance, and of an active obliging disposition; they should take a share of the work of the house, that they may not become corpulent or lazy. It is a great recommendation to a hired nurse when she has already been employed with credit in that capacity; and it should be a general rule, though not without exceptions, that women should not be hired as nurses when suckling their first child. It should be a stipulation in every engagement of a nurse, that if the child does not thrive, and if her milk does not prove sufficiently nourishing and laxative, her engagement is to be at an end.

NURSING. As nature has prepared in the parents of all animals of a certain form, a mild and wholesome fluid for the nourishment of their young, so it is evidently her dictate that each mother should suckle her own child. The advantage of this practice both to mother and child, have been eloquently insisted upon by a variety of writers; and excepting those who are absorbed in luxury and dissipation, almost every mother is anxious to nurse her own child. But there are many causes which prevent this from being done. Peculiar delicacy of constitution in some, or wrong conformation of the breasts or nipples in others, may render it impossible to nurse their children; the residence or avocations of others, whether voluntary or constrained, may be such as to render it an act of great cruelty to the child to attempt supporting it by the mother's milk. No substitute for milk is to be found in spoon-meat or other expedients, and therefore the child must be fed either in whole or in part by the milk of another woman. When circumstances admit of it, if a delicate woman is desirous to suckle her infant, (and in many cases it may be necessary she should do so, to prevent too rapid a succession of child-bearing,) an active and healthy assistant should be procured, who will relieve the mother of all the fatiguing part of the duty. There are some complaints induced by nursing, in those women who are weak and debilitated, and in some women who do not show any marks of weakness in other respects. The symptoms brought on by nursing, are inflammation or weakness of the eyes, with much discharge of gummy matter from them; thirst, and loss of appetite, weakness of the back, languor, great sweatings, especially during the night. To prevent these bad effects of nursing, care should be taken very early to teach the child regularity in the periods of its getting suck, and not to allow it to fill it-

self at all times, or to go to sleep with the nipple in its mouth. When it can be accomplished, the woman should get assistance in nursing, especially during the night; but if these measures are ineffectual, she must altogether give up the attempt at nursing the child herself.

When a woman in health nurses either her own child or another, the best way of ensuring a plentiful and regular supply of milk, is to follow the mode of life best adapted to promote good health at any time; by being regular and temperate in her diet, not eating at irregular times nor in undue quantity, and by no means indulging in drinking large quantities of beer, porter, ale, or gruel. Exercise should be taken, and all inactivity and indolence are to be avoided. The child should not be allowed to sleep with the breast in its mouth, nor to overload its stomach by sucking too much at a time. It is of great utility to begin very early to teach the child regularity in the periods of taking the breast. It is proper, at a very early time of life, to accustom the child to take a little spoon-meat, as panado, or the finer part of oatmeal boiled and sweetened. This renders the change of diet at weaning not so abrupt. At first such food should be given once a-day, and afterwards twice; and before weaning, three meals may be allowed. To delicate infants some other kinds of food may be given, as arrow-root or sago, and occasionally very weak beef tea or chicken broth. No spirituous liquors to be added to their food, on any of the foolish pretences so commonly brought forward, such as removing gripes, relieving flatulence, or promoting the flow of urine.

NUTMEGS are obtained from the *Myristica moschata*, a native of the Molucca Islands. The nut is inclosed by the *mace*, which is a soft membrane, of a dark red colour, an unctuous feel, and an aromatic flavour. The mace, by drying, acquires a reddish yellow colour. It has a strong agreeable smell, and an aromatic, bitterish, acrid taste. It yields an expressed oil, which on cooling, is of the consistence of marrow. Nutmegs are oval, greyish brown, and furrowed on the outside, of a yellow colour within, varied with brown waving lines. Their activity is confined to the dark coloured veins. Nutmegs yield by distillation an essential oil, a few drops of which are carminative and stomachic. Mace and nutmeg are rather to be considered as agreeable spices than as articles of medicine. They are heating and stimulant, and are added to other medicines for the sake of their agreeable flavour. The powder of the nutmeg is a favourite condiment in the lying-in chamber, but must be used with caution, lest it stimulate too much.

NUTS. There are several kinds of nuts used as articles of diet; but they are not in general to be much recommended. They abound in oily matter, are viscid and glutinous, and are apt with many people to prove very difficult of digestion. Dr. Paris thinks it would be wise to banish nuts from our tables, for there is a fascination in them, which will lead most persons who begin to eat them, to take a quantity which the best disposed stomach cannot bear with impunity. Hoffman observes, that dysenteric complaints are always more common in those years in which the harvest of nuts is plentiful; and there is not a physician in any practice who will be inclined to doubt his statement.

NUX VOMICA is a flat roundish seed or kernel, about an inch broad and a quarter of an inch thick, the produce of a large tree in the East Indies, the *Strychnus Nux Vomica*. These seeds contain a virulent poison, which, according to the French physiologist Majendie, seems to exert its influence on the spinal marrow, without directly involving the functions of the brain. The symptoms produced, are great anxiety, convulsions, paralytic symptoms, retching, and increased action of the heart and lungs. "Nux vomica has been said to produce benefit in the plague; the German writers have strongly recommended it in mania, epilepsy, and hydrophobia, as well as in chronic rheumatism,

gout, scrofula, syphilis, and cutaneous eruptions. In the French hospitals it has been employed in palsy. The dose is four or five grains of the powder, in pills, during the day.

"The French chemists have discovered in this substance a peculiar proximate principle, to which its virulence is owing. This they have called *Strychnia*. It is highly alkaline, and so powerful as even to be perceptible when a grain is dissolved in eighty pounds of water. In doses of half a grain, it occasions serious effects, and in larger ones, convulsions and death. It is perhaps the most powerful, and next to prussic acid, the most rapid of poisons." It has been given in epilepsy in doses of one-twelfth of a grain, but is a most dangerous remedy. (PARIS's *Pharmacologia.*) *See* STRYCHNINE.

O

ŒSO

OAK, *Quercus Robur*. The bark of the oak contains a great deal of very astringent matter, which renders it valuable as an ingredient in various gargles; and also in moderate doses internally, when astringents are necessary, as in obstinate diarrhœas. The infusion or decoction of oak bark is also used for the same purpose in the way of clyster.

OATS, *Avena sativa*. Were it for no other reason, oats would deserve a place in our work, from its furnishing us with that salutary diluent, water gruel. (*See* GRUEL.) Though oats be the food of horses in England, yet the human species in Scotland live much upon the meal of it, and thrive too; nor is it found to be the cause of the cutaneous diseases which are erroneously ascribed to its use.

OBESITY, Fatness or Corpulency. *See* FAT.

OBSTRUCTION. A term principally employed to denote the non-appearance of the monthly discharge of females. It is also applied to the state of the bowels when there is great costiveness; and when the perspiration is checked, we say it is *obstructed*.

ŒDEMA. A soft swelling in the cellular substance, a symptom of dropsy. Hence, dropsical limbs are said to be *œdematous*.

ŒSOPHAGUS, the passage for the food from the mouth to the stomach. *See* GULLET.

OLD

OIL. A fluid of a fat or unctuous nature, insoluble in water, inflammable, forming a soap with alkalies. Oils are divided into the fixed and volatile. Volatile oils are such as are dispersed into the surrounding atmosphere when exposed to heat; fixed oils are such as do not so volatilize. The principal oils used in the practice of medicine and pharmacy, are olive-oil, oil of almonds, castor oil, oil of turpentine, oil of cloves, and various aromatic oils, the properties and uses of which will be found under their respective articles.

OLD AGE. The great English lexicographer, near the close of life, when writing to a friend, says, "My diseases are an asthma and a dropsy; and what is less curable, *seventy-five*." A few precepts how to lessen the inconveniences of this last disease, may not be without their use. In old age, the sensibility of the nervous system is diminished, the muscular fibres are less irritable, and many of the arteries are ossified and obliterated. The body is bent; and those who have been tall and graceful in their youth, stoop forward in old age, more than others, from the shrinking of the cartilages that lie between the vertebræ. The body is lean, and tremulous on any exertion. The torpor of the system, and the fulness of the veins, are the chief predisposers to disease in old age. The per-

spiration is checked, probably from the obstruction of the smaller arteries; and old people are, accordingly, subject to asthma, habitual catarrh, and water in the chest. These are to be treated by the appropriate remedies; and prevented, if possible, by warm clothing, and regulating the temperature of their apartments. From the venous plethora, arise apoplexy and palsy, piles, and obstructions in the liver, which may end in dropsy. These dangers are to be obviated by scrupulous attention to the alvine and urinary discharges. The principal support of old age is to be found in nourishing and cordial diet, with a proper allowance of wine; but to many old persons, wine becomes unpleasant, while sweet things are often remarkably grateful. The appetite for solid food is frequently lessened, but many old people eat heartily, without any inconvenience. Long lying in bed is proper, both on account of its promoting the perspiration, and sparing the exertions of the enfeebled frame. But a time will come, when all these cares must prove unavailing: "it is appointed unto men once to die;" and happy are they who shall exchange the infirmities of old age for the life and immortality brought to light by the Gospel.

OLIBANUM. A gum resin from the *Juniperus Lycia*, which, when burned, diffuses a very agreeable fragrance; supposed to have been the frankincense of the ancients. It was once employed as an expectorant, but is now of little estimation as an article of the Materia Medica.

OLIVES. The fruit of the olive tree, *Olea Europea*, when pickled, is considered by many as an agreeable article of diet, and is supposed to promote appetite and assist digestion. They are prepared from the green unripe fruit, which is steeped in water impregnated with quicklime or alkali; and they are afterwards preserved in a pickle, made of common salt and water. With dyspeptic patients they generally disagree.

OLIVE-OIL. This is prepared from the fruit of the olive when fully ripe, by pressing it gently; it then yields the purest oil, but an inferior kind is procured by heating the remainder, and squeezing the fruit more strongly. Olive-oil enters largely into the diet of many nations, and is much used in medicine and pharmacy. When good, it is of a pale yellow colour, of a bland taste, and without smell; when long kept, it becomes rancid. When taken internally, it acts as a mild laxative, but not many stomachs can retain enough for this purpose. It is sometimes given in pretty large doses for the expulsion of worms, particularly some kinds of tænia or tapeworm. And it may also be given internally in small doses, with mucilage and other additions, as an emulsion in cases of catarrh and sore throat. In cases where certain poisons have been swallowed, large quantities of oil are given to correct the acrimony of the substance swallowed. When applied externally, it acts as an emollient, and forms a good medium for frictions which are designed to promote absorption, and to discuss indolent swellings. Warm oil rubbed on the belly, gives much relief in dysentery and other abdominal complaints; and the same application is one of the best means for dispersing the knots in the breasts of child-bed women, in the first days of their confinement. Olive-oil is an ingredient in many plasters and ointments. Combined with hartshorn, it forms the volatile liniment, so useful as an external stimulant. Some have said that anointing the body with oil prevents a person from receiving the infection of the plague.

OMENTUM. *See* CAUL.

ONION, *Allium Cepa.* An esculent root, which is used both as an article of food and as a condiment. Its stimulant matter is useful to the stomach, and it contains a good deal of nourishment. When skilfully mixed with soups and other dishes, it forms a very favourite seasoning. It has also diuretic qualities. With some stomachs it altogether disagrees; and it gives an unpleasant smell to

the breath of those who eat it. Garlic, leeks, and shallot, have the same properties and uses as onions.

OPHTHALMIA. Inflammation of the Eye. *See* Eye *and its Diseases.*

OPIATE. A medicine into whose composition opium enters, in some of its forms.

OPIUM. A medicine of inestimable value, and indispensable for the successful practice of physic. Speaking generally, we may say it is a narcotic medicine, but may be so managed as to procure various other salutary effects in a great variety of diseases. Opium is obtained from the white poppy, *Papaver somniferum;* and is chiefly prepared in Turkey, Persia, and India. The plant grows also in many parts of Europe, but the opium obtained in the places first mentioned, is what is chiefly valued in medicine. Opium is procured in the following manner: When the seed capsules are about half grown, two or three longitudinal incisions are made at sunset in each capsule, but so as not to reach the internal cavity; a juice exudes, which is removed as fast as it concretes; this is put into earthen pots, and afterwards dried in the sun. Opium should be of a rich brown colour, a tough consistency, and rather smooth and uniform in its texture. Its heavy narcotic smell should be strong, and free from all mustiness; and there should be no burnt odour. Its taste is bitter, and a little acrid. Opium has been produced in England, of a very good quality; but the moist and changeable nature of our climate renders it impossible to procure it good and abundant enough to supply the demand for it. Forty thousand pounds weight of opium are annually imported into the port of London.

Opium, *Preparations of.* The principal forms in which opium is used, or prepared for combination with other substances, are the *crude opium*, and the *tincture*, which is made with proof spirit. It is commonly called *Laudanum*, an appellation bestowed by Paracelsus, from the commendable efficacy of the medicine. There is an *extract* procured by dissolving sixteen ounces of opium in a gallon of water, allowing the dregs to subside, then straining the liquor, and evaporating to a proper consistence. But, says Mr. Brande, we are no advocates for meddling with crude opium, which, if originally good, cannot be improved; and although in the process much of the active matter of the drug is dissolved, and exists in the extract, much also remains behind. The preparation also has the disadvantage of uncertainty, so that it is sometimes equally active with, and sometimes less active, than opium. We have never been able to trace in it any increase of power. The *wine of opium* is a spirituous solution of the extract, combined with various aromatics. The dose is the same as that of the tincture. It is sometimes locally applied to the eye, when the vessels remain turgid after active inflammation has been subdued; two or three drops are dropped into the eye, night and morning.

Chemists have discovered in opium, among other substances, a peculiar alkaline body, to which the soporific virtues of the drug are owing; and which has received the name of *morphia*, from Morpheus, the god of sleep.

There are two other preparations of opium which deserve to be mentioned. 1. *Black Drop, the Lancaster or Quaker's Black Drop.* This preparation has been long known and esteemed, as being more powerful in its operation, and less distressing in its effects, than any tincture of opium. The manner of preparing it has been published by Dr. Armstrong, from the papers of the late Edward Walton of Sunderland, one of the near relations of the original proprietor. Take half a pound of opium sliced, three pints of good verjuice, (juice of the wild crab) and one and a half ounce of saffron. Boil them to a proper thickness, then add a quarter of a pound of sugar, and two spoonfuls of yeast. Set the whole in a warm place near the fire for six or eight weeks, then place it in the open air until it becomes a syrup; lastly, decant, filter,

and bottle it up, adding a little sugar to each bottle. One drop of this preparation is considered equal to about three of the tincture of opium; it is probable that an acetate of morphia is formed. 2. *Battley's Liquor Opii Sedativus.* Dr. Paris thinks favourably of this preparation, which is the acetate of morphia, provided we can ensure recently prepared portions as often as they may be required. It is thought to be devoid of exciting, and almost of constipating properties, and to be mild and uniform in its effects. The dose is twenty drops in those cases where the sedative effects of opium are wanted.

Opium, *Effects of.* The effects of opium on the human body are those of a narcotic, anodyne, or sedative. Some medical writers assert its powers to be stimulant, others as strenuously maintain that they are exclusively sedative. The truth is, that by diminishing the quantity of opium taken at one time, it may be made to produce a stimulant or at least an intoxicating effect; and it is on this principle we are to explain the fondness of the Turks and other eastern nations for opium, who being, by the religion of Mahomet, precluded from the use of wine, are glad to seek in the consumption of opium a method of inspiring courage, dissipating care, and procuring all the effects of intoxication. By this, also, we are to account for the lamentably increased use of opium among the lower orders of this country; who, cheap as ardent spirits unhappily are, find the excitement and dozing produced by opium, even more cheap and more pleasant.

"The symptoms and mode of action of opium have been long made the subject of dispute, both among physicians and toxicologists; and in some particulars our knowledge is still vague and insufficient. The effects of opium, through whatever channel it may produce them, are exerted chiefly on the brain and nervous system. The effect of a small dose seems to be generally in the first instance stimulating. The action of the heart and arteries is increased, and a slight sense of fulness is caused in the head. This stimulus differs much in different individuals." By repeating doses of thirty to a hundred drops when the usual torpor is coming on, the stimulus may be kept up for a considerable time in some people. "In this way are produced the remarkable effects said to be experienced by opium-eaters. These effects are always in the first instance stimulant, the imagination being rendered brilliant, the passions exalted, and the muscular force increased, and this state endures a considerable time before the usual state of collapse supervenes. A very poetical, but I believe also, a very faithful, picture of the phenomena now alluded to, is given in the Confessions of an English Opium-eater; a work published not long ago, by a gentleman who writes from personal experience. It is singular that our profession should have observed those phenomena so little, as to be accused by the author of having wholly misrepresented the action of the most common drug in medical practice. In reply to this charge, the physician may simply observe, that he seldom administers opium in the way practised by the opium-eater; that when given in the usual therapeutic mode, it rarely causes material excitement; that some professional people prefer giving it in frequent small doses, with the view of procuring its sedative effect with greater certainty, and undoubtedly do succeed often in attaining their object; that in both of these medicinal ways of administering it, excitement is occasionally produced to a very great degree, and of a very disagreeable kind; that the latter phenomena have been clearly traced to idiosyncrasy; and therefore that the effects on opium-eaters are probably owing either to the same cause, or to the modifying power of habit. This much at all events is certain, that opium seldom produces a material excitement in a single small dose; and does not always cause continuous excitement when taken after the manner of the opium-eaters. The effect of a full

medicinal dose of three grains of solid opium, or a drachm of the tincture, is to produce in general a transient excitement and fulness of the pulse; but in a short time afterwards torpor and sleep, commonly succeeded in six, eight, or ten hours by headach, nausea, and dry tongue." (Dr. Christison *on Poisons.)*

Opium, *Uses of.* Neglecting all the disputes and theories which have had their day, we proceed to mention the purposes for which opium is employed in the practice of physic, and to enumerate a few of the diseases, or other states of the system, in which it may be given. In combination, says Dr. Paris, the medical powers of opium are wonderfully extended, so that there is scarcely a disease in which it may not, during some of its stages, be rendered useful. Opium is very generally given when we wish to procure sleep. Its dose for this purpose is from twenty-five to forty drops of laudanum, or ten of the black drop, given in water either plain or sweetened with syrup, or flavoured with peppermint or cinnamon; or one grain of crude opium, alone or joined with liquorice and pepper, as in the Edinburgh formula. It is frequently prescribed to procure rest in fever, in agues, in burns, in small-pox, in dyspepsia, and in a great variety of cases of watchfulness and irritation; taking care that it be not administered, or at least very cautiously, when there is fulness of the system, an inflammatory state of the body, costiveness, or a tendency of the blood to particular organs. Opium is much employed to mitigate pain, and there is no substance whatever, which has such extensive and seldom-failing powers as this. As an anodyne, it is employed in griping of the bowels, in cramps, in gall-stones, jaundice, dysentery, and diarrhœa; and in the pain from wounds, fractures, burns, and poisons, and even in some inflammations, provided we have premised proper blood-letting. Opium is given to check immoderate discharges in diarrhœa, in dysentery, in cholera, in waterbrash. It is used to allay inordinate action, and so to act as an antispasmodic in convulsions, in tetanus, in asthma, in hysterics, in colic; and as a relaxant, it is used with other means in the attempt to relieve the urgent symptoms of strangulated hernia. Opium can be absorbed from the surfaces of sores, and so exert its peculiar powers on the system.

Opium, *Disadvantages of.* With all its excellencies, opium has some properties, which require to be watched and corrected. When continued too long, it is apt to induce costiveness, a flow to the head, and dyspeptic symptoms. These are to be counteracted by proper laxatives, or by discontinuing the medicine, or substituting some other substance, which will answer the purpose as nearly as possible. Thus henbane will sometimes answer the purpose of opium in procuring sleep, but its dose is larger, and it is more uncertain. It is very dangerous to get a habit of taking opium, as its effects on the moral character are of the most pernicious tendency; and on the body, a complete destruction of its powers is too frequently induced. All the symptoms of the worst dyspepsia, hollow sunk eyes, tremors of the whole body, a vacant look, and exhausted strength, characterise the hardened opium-taker. Medical men should consider it strictly as a necessary medicine, and never give it merely to increase the comfortable sensations of their patients.

With some persons, opium does not produce sleep, but induces a mild and pleasing delirium, in which unreal objects are vividly pictured to the mind's eye. With others, the delirium presents nothing but scenes and figures of terror and impending danger, as rocks ready to fall, or torrents about to overwhelm them.

Opium, as Mr. Brande very properly observes, if ever administered to children, requires to be given with more than ordinary caution; it should never be resorted to in any form, except upon emergencies; and all opiates, especially syrup of poppies, and some nostrums containing opium, which are but too frequently used

to quiet children, should be imperiously excluded from the list of nursery medicines.

Opium, *in combination with other substances.* There are several most useful medicines, in the composition of which opium is the principal ingredient. As an external application for allaying pain, the tincture of soap and opium is an excellent remedy. To allay irritation in coughs and other diseases of the chest, when all fear of inflammation is gone, the medicines known by the name of paregoric elixir are given with advantage. It is to be noted that the Scotch differs from the English paregoric in its composition, and as the active ingredient, opium, is in larger proportion in the Scotch than in the English, respect is to be had to this in prescribing either the one or the other. The Scotch paregoric is a combination of opium and ammonia, and is to be prescribed in the dose of a tea-spoonful in cold water at bed-time. The English is combined with the tincture of camphor, and may be taken in doses three or four times as great. A narcotic medicine combined with an emetic is found to make one of the most effectual sudorifics, and not a more powerful and certain sweating medicine can be contrived, than that which is known by the name of Dover's powder, which consists of one part of opium and one of ipecacuan, joined with eight parts of an innoxious neutral salt to aid their mechanical division and intimate union; of this powder, ten or twelve grains are to be given, and the perspiration to be promoted by drinking warm gruel or other diluent liquors, but not immediately after the powder, for fear of exciting vomiting. A liquid sudorific may be made of twenty-five drops of laudanum and thirty drops of ipecacuan or antimonial wine; but if there be inflammatory symptoms present, opium must be avoided, and other sudorifics employed. Opium with prepared chalk, is given to check diarrhœa. Twenty-five drops of laudanum with half a drachm of ether, often relieve spasmodic asthma.

Opium, *Effects of an over-dose of.* By mistake or design, opium is sometimes swallowed in such a quantity as to produce very alarming effects. The principal of these are giddiness, a bloated and flushed appearance of the face, a slow full pulse, and oppressed breathing as in apoplexy. There are also troublesome dreams, starting, or convulsions, cold sweats, vomiting, hiccup, and fainting. As soon as this accident has been discovered, the stomach should be emptied by the stomach-pump, or by a speedy emetic, as thirty grains of the sulphate of zinc, or eight of the sulphate of copper, dissolved in three or four ounces of warm water; and its operation is to be assisted by drinking chamomile tea. When the stomach is evacuated, drowsiness must be prevented by keeping the patient in continual motion; strong coffee has been found to diminish the headach and stupor; and bleeding, especially from the jugular vein, should be resorted to, for the purpose of relieving the apoplectic symptoms. After this, ammonia and other stimulants are to be tried. If the patient cannot swallow, or if the emetics do not empty the stomach; if the pupils are dilated, the breathing stertorous, and the system in a state of torpor from which it cannot be roused, there is every reason to fear that death will be the consequence of the poison. *See* Laudanum.

"The ordinary duration of a fatal case of poisoning with opium, is from seven to twelve hours. Most people recover who outlive twelve hours. The dose of opium requisite to cause death, has not been determined. The dose required to prove fatal is very much altered by habit. Those who have been accustomed to eat opium, are obliged gradually to increase the dose, otherwise its usual effects are not produced. Some extraordinary, but I believe, correct information on this subject, is contained in the Confessions of an English Opium-eater. The author took at one time eight thousand drops daily, or about nine ounces of laudanum." (Dr. Christison.)

OPODELDOC. A substance used for external application to bruises and pained parts. The tincture of soap and opium is as good a one as can be used. Steer's opodeldoc is made of Castile soap, rectified spirit, camphor, oil of rosemary, oil of origanum, and solution of ammonia.

ORANGES, *Citrus Aurantium.* A well known and pleasant fruit growing plentifully in China, and in the south of Spain. Oranges are gratefully acid, and of much utility in feverish disorders for quenching thirst, and cooling the system. The seeds and tough white rind are to be rejected; and probably the way to take them with least injury to the stomach and digestive powers, is to squeeze the juice, and to take it a little diluted; with the addition of sugar, if necessary. An essential oil may be obtained from the rind; and the tincture of the dried rind is a good tonic, and enters into the composition of Huxham's tincture of bark. Oranges, when they can be preserved in sufficient quantity, are an excellent preventive and cure of sea-scurvy.

ORANGE-FLOWER-WATER is an agreeable and harmless perfumed water got by distilling the flowers of the orange tree. It is one of the favourite remedies for disease in France, and may probably do good on the principle of their *diæta aquea*, by enforcing abstinence, and keeping away injurious stimuli.

OSSIFICATION. The formation of bone, or the conversion of a soft part into bone by the deposition of osseous matter. This often takes place in arteries, especially about the valves of the larger arteries, and by altering their structure and interfering with the proper performance of the functions, it lays the foundation for many dangerous and fatal diseases. Aneurism, angina pectoris, asthma, difficulty of breathing, are all found, in many instances, to be accompanied by ossification of the arteries. We cannot pronounce with certainty that this ossification has taken place, and if we could, there is no means of cure; all we can do is to palliate symptoms, and to relieve, as we are able, those that are most oppressive.

OVARIUM. An appendage of the female uterus, of which there is one on each side. Their substance is spungy, and very frequently the seat of disease. They are liable to become hard and swelled to a very astonishing size, and either themselves to contain a watery fluid, or by pressing on the vessels and other parts contained in the abdomen, to occasion the accumulation of water in the belly. It is in ovarian dropsy that most relief is got by tapping, and many patients have lived long under this complaint, and been repeatedly relieved of great quantities of fluid. The ovarium has sometimes been cut out, even when prodigiously swelled; but it is an operation hazardous in itself, important in its consequences, and by no means to be rashly ventured upon.

OVUM, in physiology, signifies the whole contents of the impregnated uterus, the membranes, with the embryo and waters contained in them.

OXALIC ACID. The acid of wood sorrel, obtained from many vegetables by certain processes. It is obtained in a concrete form, and becomes an object of considerable interest from the resemblance of its crystals to Epsom salts. From its being employed to clean boot tops it is kept for domestic use, and is too often mistaken for salts, and acts as a virulent poison. The symptoms produced are those of great pain, and a burning sensation at the stomach, vomiting, inflammation, and bloody stools. When a person is discovered in time to have swallowed oxalic acid, the most likely means of relief is to give very plentifully of lime-water or chalk, by which an oxalate of lime is formed, that will be comparatively innoxious. The danger and the frequency of this accident call strongly for the most minute attention on the part of apothecaries and druggists. There is no test so good as the taste, which should always be exercised when there is any doubt. The

Epsom salts are crystallized in large crystals, which the druggists very properly say cannot be mistaken for oxalic acid; but it would be still better if they could impart some striking distinction to the oxalic acid, as there is no great danger to life though the salts should be used, where the acid is intended; but very great risk when the acid is taken as sulphate of magnesia.

OXYGEN is a substance of such general and important operation, that though it strictly belongs to chemistry, we may be allowed to say a little of it here. Oxygen gas, or vital air, is one of the component parts of our atmosphere, of which it forms about twenty-one parts in the hundred. It is that part of the air by which it is rendered fit for the breathing of animals, and for the combustion of burning bodies; in oxygen gas, inflammable bodies burn with great brilliancy. Oxygen enters into combination with a very great variety of bodies; with several combustible bodies it forms acids; with two metals it forms the two fixed alkalis, and with the majority of metals it forms oxides or earthy looking substances, which combination is necessary before these oxides unite with acids to form the metallic salts. Oxygen entering into combination with hydrogen or inflammable air, forms water.

OXYMEL. Vinegar and honey boiled together to the consistence of syrup. It is used as an aperient and expectorant, and given as such, in asthma and other diseases of the chest. The dose is one or two drachms, and it may be added to any diluent fluid or tepid water.

OXYMEL OF SQUILLS is made by boiling honey and vinegar of squills instead of common vinegar, and has virtues of the same kind as the last substance, but higher in degree. If given in too great quantity, it will prove emetic. To prevent its having any nauseating effect, it may be given with a little cinnamon water; or a little powdered ginger or nutmeg may be sprinkled in the draught.

OYSTERS. A shell-fish which has enjoyed a long and general reputation, greater, Dr. Paris thinks, than they deserve. When eaten cold they are frequently distressing to weak stomachs, and require the aid of pepper as a condiment; and as they are usually swallowed without chewing, the stomach has an additional labour to perform. They are still less digestible when cooked. They are, no doubt, very nourishing, and contain a considerable quantity of nutritive matter in a small compass; but this latter circumstance affords another objection to their use. Oysters have sometimes produced injurious effects, which have been ascribed to their having lain on coppery beds; but this idea arose from the green colour which they often acquire, not from copper, but by their being placed where there is a great deposit from the sea, consisting of the vegetating germs of marine plants, *conferv*æ and *fuci*, which impart the colour to the oyster. The Dutch used to carry oysters from our coasts and deposit them on their own, on purpose to obtain this colour. The evils produced by eating oysters seem not to depend on any peculiarity in them, but on the state of the stomach and their indigestible nature together; and the stomach would have been in the same way disordered by any other food equally indigestible. At certain times of the year, oysters are out of season. In May, they cast their spawn, after which they are sick and unfit for food; but in June and July, they begin to mend, and in August, they are perfectly well.

OZÆNA. An ulcer in the nose, noted for its abominable smell, probably a disease of the turbinated bones in a scrofulous constitution. It is to be treated by frequently throwing in astringent solutions, as of sulphate of zinc or copper, or applying these substances in the form of powder, by blowing them through a tube so as to reach the diseased part; which is also to be kept clean by frequent washing with milk and water, or tepid water rendered slightly astringent by a little white vitriol, and thrown up by a syringe.

P

PAL

PAIN. An uneasy sensation, which generally accompanies diseases of structure, and which occurs in many cases, where no alteration of parts can be detected. It is a constant attendant on inflammation, and forms one of the marks by which that state of action is characterised. It is a common attendant also of spasm or irregular action. It is one of the symptoms by which we are led to know the diseased state of internal parts, which are removed from the cognizance of our senses. It is one of those sensations which irresistibly claim our attention, and from which we shrink with instinctive horror. Pain is of many different kinds and degrees, from the sharp lancinating pain of cancer or the stone, to the dull obscure uneasiness of schirrous liver. When there is great destruction and alteration of parts without pain, it is a symptom of the death or mortification of the part. In the treatment of diseases and pain, we must not always be led away by that urgent symptom, but we should always endeavour, if possible, to discover the cause, and prescribe for the primary disease. For the relief of mere pain, we have in opiates and other narcotics, very powerful remedies; but we must take care lest our relief be only temporary, and lest we be seduced by the hope of present ease, to lay the foundation for permanent mischief.

PAINS OF LABOUR. *See* LABOUR.

PALATE. The arch of the mouth, surrounded before by the teeth and gums, and extending backward as far as the great opening of the gullet. This arch is partly hard and immoveable, and partly soft and moveable. The solid part is formed by the two upper maxillary bones and the two palate bones. The soft part

PAL

lies behind the other, and it is lined by a membrane full of small glands, which pour their fluid into the mouth. The palate is sometimes divided by one or more fissures, in cases of hare-lip; and the uvula, or pap of the throat, is cleft in two; in consequence, the child cannot suck properly; and the voice is broken and unnatural. In common language, the palate is used for the taste, from its being a principal seat of that sense.

PALLIATIVES. Medicines which are given, or remedies which are applied, not with the view of radically or completely curing a disease, but in order to give relief to certain urgent symptoms.

PALM. A family of plants which generally grow within the tropics; and which furnish, with little trouble, clothing, food, and habitations. The fruit of the palm is commonly a dry berry, whose shell is formed of numerous fibres closely compacted; varying in its form, and sometimes equalling in size a man's head. The cocoa-nut is the fruit of a species of palm, the *Cocos nucifera.* From the seeds, or the nut-like kernel, sweet oil, or a kind of butter, may be pressed out. The milky fluid found in the cavity yields a refreshing draught; by evaporating it, sugar may be obtained; and, by the usual processes, wine, spirit, or vinegar. The spirit obtained is called *toddy*, in India.

PALM-OIL is produced from the palm, which in Jamaica is called the Mackaw Tree. It is used alone, or mixed with some stimulating substance, to rub on parts affected with chronic pains.

PALPITATION. A violent and irregular action of the heart, in which the patient is made sensible of violent beating of that organ, alternated with a sense of faintness and sinking, and often accom-

panied with a difficulty of breathing, a purple colour of the lips and cheeks, and other symptoms that attend on imperfect circulation.

Causes. Palpitation is very frequently occasioned by fear, surprise, and other emotions of the mind; and is a frequent symptom of hysteria, and other nervous disorders; it is sometimes brought on by costiveness and indigestion. It occurs in constitutions that are plethoric, irritable, and easily moved; it is often owing to organic diseases of the heart and great vessels, or to a faulty make of the chest. Many of the things that induce fainting, as heated rooms, bad smells, disgusting sights, also induce palpitation.

Treatment. This altogether depends on our knowing the causes of the palpitation. If it be organic disease, the most we can hope is to palliate symptoms by keeping down plethora, and by avoiding every thing that would disturb the mind, or quicken the circulation. If it is owing to too great fulness, that is to be reduced by a spare diet, and by occasional small bleedings. If palpitation be connected with debility, with hysteria, or with any nervous disease, the patient must employ tonics, as bark and wine, or steel; must try to get the hysterical tendency lessened or cured; and occasionally ether, or other antispasmodics may be employed. Those subject to palpitation must keep out of the way of the occasional causes, of sudden surprises, exciting passions, or violent exercises. *See* HEART, HYSTERIA, NERVOUS.

PALSY. A disease in which some part of the body is affected with the loss of sense and motion. It may be of all degrees, from a universal attack of the whole body, or a complete palsy of one of the sides, to the palsy of a single finger, or a few fibres of a muscle. It proceeds from the same causes as apoplexy, and is in reality often a modification or partial attack of that disease. When a patient, by proper remedies, or the powers of nature, recovers a little from an attack of apoplexy, it is very common for him to be seized with palsy

Palsy sometimes comes on suddenly, at other times there is numbness, coldness, and paleness of the part about to be affected. Sometimes the judgment and memory are impaired; the speech is imperfect from the disease of both body and mind; the mouth and cheeks are distorted, and the countenance is expressive of much anxiety. When the lower extremities are partially affected, the patient drags them after him.

Causes. The same causes that excite apoplexy, when applied in a less degree, occasion palsy; therefore tumours, wrong determination of blood, bruises, pressure on nerves, the drying up of usual evacuations, are often found to induce palsy. Certain sedative substances, long applied, produce palsy of some parts of the body, as we see in those who work among lead, who are affected with the Devonshire Colic; one remarkable symptom of which is the palsy of the thumbs and calves of the legs. Palsy is not unfrequently produced gradually by some tumour, or other disease which presses on the vertebræ of the back; and this is commonly the cause of the palsy of young people.

Prognosis. It is generally unfavourable. Palsy does not suddenly prove mortal. Its cure is the more difficult the more the senses are injured; and such cases commonly continue till the end of life, often very remote. When palsy follows apoplexy, or happens in old people, it is seldom cured. The palsies of young people are sometimes recovered from. If convulsions occur in the parts opposite to those that are palsied, the danger is great. When palsy occurs from pressure or blows on the spinal marrow, or on any large nerves, it is generally hopeless, and the dragging of the limb is seldom got completely the better of.

Treatment. When palsy comes on suddenly, it is proper to treat it as we do apoplexy, by bleeding, by purging, by blisters to the head; and when the acute symptoms are in some measure relieved, to apply stimulants to the limbs,

or parts weakened, if they are within our reach. When the case is of longer standing, and the constitution is in a state of debility, these evacuating measures would be improper; and instead of them we must be contented with stimulating applications, aided by such exercise as the patient is able to take. It is surprising how much may be done in cases apparently very hopeless. The patient must not be discouraged at the apparent bad success of his first efforts at motion, but must persevere, and his perseverance will probably at last be rewarded. The applications proper for palsied limbs are such as the following: Ammoniated oil, camphorated oil, cajeput oil, when it can be got; turpentine and oil, warm sea-water, warm salt, stinging with nettles, mustard, &c. Electricity and galvanism are also frequently had recourse to; also the use of the Bath or other mineral waters pumped upon the palsied limbs. Our choice of internal medicines must be determined by the state of the constitution. If there be any excitement, or inflammatory tendency, or any probability that the palsy may be followed by apoplexy, all internal stimuli must be avoided; and it is only in old cases, unattended by fever, that we are to give such medicines as guaiac, iron, aromatics, or the like. Paralytic limbs should be kept warm, and well covered with flannel. The diet should be light and nutritive. The patient should take what exercise he can; and if he is unable to do it by his own exertions, he must have it by a carriage, or by sailing, or by a swing. In the palsy of the lower limbs from diseases of the spine, issues to the back, or to the neighbourhood of the diseased vertebræ, are of great service. *See* PARAPLEGIA.

PALSY *in Children*, occurs pretty frequently, and attacks infants and young persons in different degrees. It often attacks one side at first, and gradually comes on the other side. It is generally attended with costiveness and deranged state of the bowels; and, accordingly, a course of purgative medicines of considerable activity, as jalap and calomel, or rhubarb and calomel, in no long time effects a cure. Blistering on the head, or on the palsied limb, may be tried; and leeches to the temples, when the head is much affected. If the palsy is owing to water in the head, it is to be feared the case is hopeless. Tonic medicines and external stimulants are proper, when there is no fever present. Electricity is often a valuable assistance to other remedies.

PANACEA. A fancied medicine, of power to cure all diseases.

PANADO. The crumb of wheaten bread softened with boiling water; an excellent diet for children, for those in febrile diseases, and for women in the first days after delivery. It is to be sweetened with sugar, and at proper times may have an addition of milk, or wine.

PANCAKES are in general very agreeable to the palate, but difficult of digestion, from the quantity of greasy matter they contain, and also from this matter being fried. Pancakes should, therefore, not be allowed to dyspeptic patients; and children should rarely be indulged with them.

PANCREAS. One of the abdominal viscera, situated near the liver, believed to secrete a fluid like the saliva, useful in digestion; for which purpose it is poured into the upper part of the intestines, nearly at the place where the bile is conveyed into them.

PARAPLEGIA, a species of palsy, in which one half of the body is deprived of sense or motion, but in which the line dividing the unhealthy from the sound part is not from head to foot as in hemiplegia, but across the body. Generally the lower extremities and the viscera of the pelvis are concerned in this affection. Besides the loss of motion, great inconvenience is felt, from inability to retain the water and stools. It arises from distortion, from a violent shock, or from long continued cold. Blisters and warm

stimulants, both internal and external, are necessary; and the Bath waters, sea bathing, and warm and cold bathing may be freely employed. A blister at the lower part of the back may assist in the retention of the usual evacuations; and a cautious use of cantharides may be tried for restoring the tone of the bladder.

PAREGORIC ELIXIR. A composition of opium with camphor or ammonia, useful to allay irritation and tickling cough after inflammation has subsided. The usual dose is a large teaspoonful in a glass of water. We have already, under the article OPIUM, given an account of the composition, uses, and doses, of paregoric elixir, and have also remarked the difference between the Scotch and English paregoric.

PAROTID GLAND. A large gland situated in the neighbourhood of the ear, for the purpose of secreting the saliva, so necessary for digestion and for moistening the mouth. Its duct opens into the mouth near the third of the grinding teeth; and the gland is so placed as to be a good deal agitated by the motion of the lower jaw; so that during mastication, when the greatest quantity of saliva is wanted, we have the greatest supply. Like other glands of the neck, it is not unfrequently the seat of inflammation, and sometimes swells to a great size after fevers. Such swellings are to be treated by poultices and fomentations.

PAROXYSM. A fit, or sudden and violent attack of disease, as of fever, asthma, hysterics, &c.

PARSNIP, *Pastinaca sativa*. A vegetable used at table; it is nutritious and easily digestible; but its sweet flavour is disagreeable to many persons. A wine can be made from it.

PARTURITION. The bringing forth of a child. *See* LABOUR.

PASSION. This term is in common language applied to one or two diseases, which attack with great suddenness and violence, as the *Hysteric passion*, the *Iliac passion;* for the account of these diseases, *See* HYSTERIA *and* ILIAC PASSION.

PASSIONS. The passions of the mind, considered medically, are divided into the exciting and depressing passions. Some of the exciting are anger, joy, emulation, hope; of the depressing, fear or terror, grief, envy, jealousy. The effects of anger, are flushing of the countenance, quickening of the circulation, and in some cases, apoplexy or epilepsy; in those afflicted with organic diseases of the heart or great vessels, the excitement produced by anger has occasioned sudden death. Joy has been known to occasion madness; and in periods when the rage for commercial speculations seemed epidemic, the flush of sudden prosperity brought on more cases of insanity, than the grief for disappointment and ruin. The depressing passion of fear, though it is not an exciting cause, is certainly a predisposing one of several morbid affections. When continued for some time, it may induce indigestion, and diseases of debility; and it renders persons peculiarly susceptible of the contagion of fever, and other infectious diseases. Hence the good of amulets and preservatives, which, though useless in themselves, inspire confidence; and thus fortify the mind and body against infection. Strong and sudden terror may at once extinguish life, or it may produce madness or epilepsy. Grief, when deep and long indulged, produces a languor and debility of all the functions, which appears particularly in the digestive powers. Besides the proper moral treatment, the diseases produced by any passion are to have such remedies applied as would be employed in any other case. The passions are more likely to produce injurious effects when the mind and body are weak: hence, during child-bed, most particular care should be taken not to agitate the minds of women. All distressing intelligence should be withheld; no stories should be told of bad cases that have occurred elsewhere, and nothing hastily said about the illness or defects of the child. The looks and manners of the friends and attendants should be those of tranquillity, if not of cheerfulness; and

every occasion of surprise, fear, or anger, should be studiously kept out of view. Suppression of the lochia, repulsion of the milk, various fevers, and even madness itself, may be the consequence of mismanagement of the mind during the period of confinement.

PASTRY, or dough mixed with butter, is used in a great variety of forms, and is grateful to the taste but injurious to the health. It is a fertile source of all the varieties of stomach complaints, and is apt to occasion plethora and the apoplectic tendency, as well as many skin diseases. At dinner, in the shape of tarts and confectionary, pastry is thrown into the already loaded stomach, and its overtaxed powers are unable to digest what is difficult to manage at its most vigorous times. To children, pastry is peculiarly unsuitble. Its taste is pleasant, and injudicious fondness is apt to indulge them with it; but those children who use it much, are subject to runnings from the ears, disorders of the bowels, eruptions on the skin, and inflammatory complaints of various kinds. Pastry should be almost totally excluded from the nursery table.

PATENT MEDICINES. *See* QUACK MEDICINES.

PATHOLOGY is that division of the Institutions of Medicine which investigates the causes of disease in general, or the morbid alteration of the structure or functions of any particular part. The bases on which pathology rests, are a careful observance of the circumstances that precede a disease, of its symptoms when present, and, above all, the examination of the internal parts of the body after death.

PEACH, *Amygdalus Persica*, a delicious stone-fruit, salutary when used in moderation, but not when the stomach has already a copious dinner to digest.

PEAR, *Pyrus*. An agreeable fruit, of many species, from which the liquor called *perry*, is obtained by expression. It is cooling and agreeable, but too acid for weak stomachs. Pears, when good and ripe, may be freely eaten.

PEASE form a wholesome and light food when green and young; but when full grown and dry, they are very indigestible; and in this state they are very liable to produce a great deal of wind in the intestines. When made into pudding, they are still worse, as the difficulty of digestion is increased by the toughness of the mass. The flour of pease, beans, and other leguminous plants, commonly called pulse, is of an unctuous nature, and forms a milky solution with water, owing to the presence of an oily matter. Pulse is highly nutritive, but difficult of digestion, and when made into bread they are apt to occasion flatulence, and to lie heavy on the stomach. It is principally the strong labouring classes that are able to digest this sort of bread. Those troubled with stomach complaints should carefully avoid them; flatulence and colic very commonly follow their use in such persons, and even more alarming symptoms.

PELVIS *or* BASON, the lower part of the abdomen. *See* ABDOMEN.

PENNYROYAL, *Mentha Pulegium*. A species of mint, which, on distillation with water, affords a pungent aromatic oil; this oil is occasionally added to antispasmodics, and is thought to be emmenagogue; but its virtues in this way are but small. Pennyroyal water is used as a vehicle for other medicines.

PENZANCE. By referring to our articles on CLIMATE and CONSUMPTION, it will be seen that, in the advanced stages of that disease, our hopes of benefit from a change of climate are but small, and that residence in a foreign land, as the south of France, is attended with many inconveniences. We have stated also, that on the coasts of Devonshire and Cornwall, are some good stations for invalids. We now mention, that Penzance and the district of the Land's End, seem to promise advantages of very considerable importance. This district appears to possess, in a great degree, the qualities most desirable for consumptive patients; not a high temperature, but a high mean temperature, and a short range; the tem-

perature being considerably higher in winter than that of any part of this country, and lower in summer than in the warmest parts of it; and in regard to the mean of the cold months, bearing a comparison with the best parts of the south of Europe. At Penzance, the extreme heat in summer is considerably less than in London. For some years past, Dr. Abercrombie has sent several patients with affections of the chest, to spend the winter at Penzance, or at a place called Tor Quay on the coast of Devonshire, which presents still greater advantages. *See* Tor Quay.

PEPPER. An aromatic and stimulant production of several plants of warm climates, which is pretty extensively used both in cookery and medicine. There are different kinds of pepper, the principal are Cayenne pepper, Jamaica pepper or allspice, long pepper, black pepper, and Java pepper. Cayenne pepper, as well as the other kinds, forms an excellent gargle in sore throats, especially those proceeding from relaxation, and in the putrid sore throat and scarlet fever. Pepper is a useful article in cookery, as it stimulates the powers of the stomach, and prevents the flatulence which is apt to arise from the use of vegetables. With such diet, pepper is almost universally necessary.

PEPPERMINT, *Mentha Piperita.* A plant whose leaves have a strong and somewhat agreeable smell, a pungent aromatic taste, with a peculiar sensation of coldness. Its qualities depend on an essential oil and camphor, both of which rise in distillation, and are combined in oil of peppermint. This plant is principally used as a carminative and antispasmodic. The distilled water is sometimes given in flatulent colic, and it is a good vehicle for administering other medicines. A drop or two of the oil of peppermint on loaf sugar, is often given with advantage in cramps of the stomach.

PERICRANIUM. The thin membrane immediately investing the bones of the skull.

PERINEUM, the space between the verge of the anus and the genitals, extending about an inch laterally. It is of great importance for surgeons to be perfectly well acquainted with the muscles and blood-vessels which are situated there, as they are much concerned in various operations; and in cases of labour the perineum requires to be carefully supported, to prevent laceration.

PERIPNEUMONY. The correct definition of this word is an inflammation of the substance of the lungs, as distinguished from pleuritis or pleurisy, the inflammation of the membrane which invests the lungs, and lines the cavity of the chest. In practice it is difficult to make the distinction, and for all useful purposes it is needless to do so; as the same assemblage of symptoms marks the inflammation of both parts, and the same plan of treatment is required in both. We have already detailed the symptoms and treatment of pleurisy and peripneumony. *See* Lungs, *Inflammation of.*

There is an affection of the chest called Spurious or Bastard Peripneumony, which we now proceed to describe. Those who are advanced in life, or of a phlegmatic constitution, are they who are principally subject to this disease; it attacks those who have been formerly subject to catarrhal affections. It is apt to be brought on by cold, or changes of temperature; and therefore like other affections of the chest, is common in spring. It comes on with shiverings, alternating with flushes of heat; there is flushing of the face, pain or giddiness in the head, a sense of weariness, difficulty of breathing, oppression and dull pain of the chest, with a cough and slight expectoration, and sometimes the discharge of viscid mucus from the stomach. The disease is occasionally slight like a catarrh, and goes off with a little expectoration; at other times it is so severe as to indicate a considerable degree of inflammation, and this, giving rise to the effusion of much fluid into the air cells, carries off the patient, sometimes suddenly

Treatment. When the inflammatory symptoms are high, with much difficulty of breathing and great pain, it may be proper to try a small bleeding; but we must be cautious not to carry it too far, remembering that spurious peripneumony is commonly a disease of aged and infirm people, and that the expectoration may be checked, and the patient be suddenly carried off by effusion into the lungs. It is a safer practice, in general, to apply a large blister over the part affected; and if the disease does not soon yield, a succession of blisters may be tried. An emetic is sometimes beneficial, and antimonials in small doses may be given, to produce a moderate perspiration; and diluent drinks, as of gruel or toast-water, are to be freely used. Expectorant medicines, as the squill mixture, are to be given. Costiveness is to be prevented by proper mild laxatives; and to obviate debility, we must give nourishing diet and a little wine, avoiding heating and stimulant food and drink.

PERISTALTIC MOTION of the intestines. That motion by which one small part of the intestines contracts successively after the part above it, by which the food, chyme, chyle, fæces, or other contents are kept moving towards the termination of the alimentary canal, without any retrograde motion. When this motion is inverted by disease, as in rupture or the iliac passion, matters given by way of clyster, are seen to be rejected by the mouth.

PERITONEUM. The fine membrane which lines the inside of the abdominal cavity, and which also envelopes every portion of the intestines. It is liable to inflammation from various causes, and all wounds of it, or acrid substances applied to any part of it, are apt to excite this inflammation.

PERITONITIS, INFLAMMATION *of the* PERITONEUM, is characterised by great tenderness of the whole of the belly, accompanied by heat, thirst, and other febrile symptoms. It is very often a sequel of child-bearing, but by no means exclusively so, as it often occurs in males. It is distinguished from inflammation of the bowels, principally by there not being complete costiveness; the rest of the symptoms are pretty much the same. The treatment is to be conducted on the general plan of relieving inflammation, by copious bleeding, by purgatives, especially the saline, by blisters, by antimonials, and the avoidance of all irritating circumstances.

PERITONITIS *of Childbed Women.* As peritonitis is so frequent a disease of childbed, we shall be a little more particular in mentioning its symptoms and causes in that state. The patient is seized with shiverings, succeeded by heat, thirst, a quickened pulse, and pain or soreness in some part of the belly. This is much aggravated by motion or pressure, and even the weight of the bedclothes is insufferable. The abdomen often becomes swelled, almost to the size it was before delivery. To obtain some slight ease, the patient lies on her back, with the feet drawn up, and the knees bent. There is often great sickness at stomach, with constant vomiting of bilious matter. Sometimes there is costiveness, at other times a looseness, or frequent straining at stool. The lochia are sometimes suppressed, but not invariably so. The skin is hot and dry, the pulse small and quick, 130 in a minute; the thirst is great, the appetite diminished, and the patient is restless and unable to sleep.

Causes. The causes which are apt to induce this inflammation in the puerperal state, are tedious or difficult labour, officiousness in the practitioner, the use of instruments, cold checking the perspiration, and the improper use of spirituous or other heating liquors.

Prognosis. When the symptoms above described persist and go on to worse, when cold sweats break out, and the natural discharges take place involuntarily and when the extremities are cold, the disease may be regarded as about to terminate fatally. We have better hopes when a gentle perspiration comes out,

when the pulse becomes fuller, the breathing easier, and when the flow of milk returns, or that of the lochia, if they have been suppressed.

Treatment. Bleeding, although our principal remedy, is to be employed with great caution. In the robust and plethoric, who have not been weakened by a long and painful labour, or by great loss of blood after delivery, we may bleed pretty largely, if the inflammation has come on early; but we must be cautious how we repeat a general bleeding; and must be content to abstract blood topically by means of leeches. We need not be very limited in the numbers we put on, from one dozen to four may be applied, according to the urgency of the case; and when they come off, we may cover the whole abdomen with a poultice of bread and milk, after fomenting with hot water, or the decoction of chamomile flowers. The action of the intestines may be promoted, and the irritation and restlessness allayed, by giving at intervals of four or five hours, three grains of calomel with five of Dover's powder, interposing a smart dose of the compound powder of jalap, or of castor oil, or a saline purgative. When the disease appears to abate a little, we are to give nourishment, being very cautious both with respect to the quantity and quality of it. Much care is requisite to avoid a relapse.

PERSPIRATION. Through the innumerable pores of the skin, there is a continual discharge of watery vapour, which may be easily perceived by applying the finger to the surface of a bright polished piece of metal, or of a looking-glass, when a dimness will be seen which quickly evaporates into the surrounding air. This vapour having answered its purpose in the animal economy, becomes useless and noxious, and requires to be thrown out of the body. Much of this vapour is discharged by the lungs, but a great deal also by the skin, either in a gaseous form, or as a vesicular vapour, or in the more fluid form called sweat. The discharge by the skin sympathizes also very much with the secretion by the kidneys; and these three organs, the lungs, the kidneys, and the skin, are the three great emunctories of the body, and divide among them the task of throwing off the superfluous fluids that have circulated through it. In some constitutions, as compared with the generality of mankind, there is a habitual deficiency of perspiration; in others, it goes to excess; and as long as these differences do not produce ill health, they need not be much regarded. Great inconvenience and danger arise from the perspiration being checked; and as cold is one of the most powerful agents in doing this, exposure to cold air, or cold in any other way, is one of the most common causes of disease. It is not easy to enumerate the great variety of diseases which originate in cold producing a check to perspiration. Different persons are subject to different diseases from this cause. In some, it produces feverish disorders of all their various forms, inflammations, sore throats, colds, swelling of the glands, and many others: in some it occasions derangement of the stomach and bowels, gripes, looseness, or dysenteric symptoms. In our variable and uncertain climate, the keeping up of an equable perspiration is one of the principal things to be attended to in the preservation of health; and much of the sufferings from rheumatic complaints, and the multiplied fatal consumptive cases so common in this country, are to be traced to the neglect of this salutary precaution. This is to be accomplished by proper clothing, as wearing of flannel next the skin, or chamois, or fleecy hosiery, or the like; being careful not to expose the body suddenly to cold air, which is often done by persons going from warm rooms, or crowded assemblies, when the perspiration is abundant; and probably every person that reads this, will remember many, and perhaps some fatal cases of diseases brought on, either in his own person or those of his friends, by the unguarded passing from the crowded church or other assembly to the keen

air of a frosty evening. Another very common and pernicious way of checking perspiration is by sitting or standing in a current of air; hence smoky rooms which require occasionally to have a chink of the window open, are among the exciting causes of colds, toothachs, and sore throats; and hence the merciless button-holder, who keeps you standing at the corner of a street, with the keen north or east wind blowing upon you during his long harangue, is to be avoided, as you value your health and comfort. All diminution of the usual quantity of clothing must be made very gradually and judiciously. The bedclothes or coverings of the head must not be hastily thrown off or changed; one fine day in the spring or beginning of summer, must not tempt us to lay aside our flannel clothing, or to adopt the thin Indian dress, which is allowable only in confirmed sultry weather; and our capricious climate often warns us, by an attack of rheumatism or sore throat, that a British May is not entitled to the same panegyric as that month has received, from the pens of the southern poets. It may possibly be objected to the above hints and precautions about the check to perspiration, that their tendency is to encourage a timid and valetudinary spirit, to foster the selfishness so common in those who make their own health and ease a primary object, and to make them unfit for the active and regular discharge of the duties of life, which ought to be the purpose of every man. But these precautions are useful and necessary; good sense must prevent them from being carried to excess. It would certainly be a most desirable attainment to be strong and hardy, to be able alike to meet the winter's frost and the summer's heat, to be proof against the numerous privations and inconveniences to which life is subject; but this independence must be acquired at an early age, and our plans must be regulated by the constitution of the child whom we thus propose to harden. A considerable number of children may be thus seasoned; but there are a great many who will require a different management, whose clothing must be warm, whose diet must be nourishing, and who must not be unnecessarily exposed to vicissitudes of weather.

In some diseases, especially fevers, the dryness of the skin and the want of perspiration, is one of the symptoms we are most anxious to remove; as it is found, that on the restoration of the moisture of the skin, depends the cessation of the sickness and vomiting which are present, and also a diminution of the febrile heat. Excessive perspiration is one of the great signs of hopeless debility in hectic fever, and in some other complaints; and we try to moderate this symptom by regulating the clothing and the temperature in which the body is kept. Astringent medicines, as the sulphuric acid or the elixir of vitriol, are to be given; but if the sweats be partial, the checking of them by any means, external or internal, is injurious, and not without danger.

PERUVIAN BARK. *See* BARK.

PESSARY. A substance introduced into the vagina, to prevent the falling down of that cavity, or of the uterus, chiefly by giving a mechanical support, and in some measure filling up the passage. They in many cases afford great relief, and by the support they give to the parts, enable them to recover their tone, and so accomplish a permanent cure. Pessaries are of different shapes and materials. They are globular or circular, with all corners rounded off, and a hole in the middle for the convenience of withdrawing it for the purpose of cleaning. They are made of boxwood, or of metal (but rarely); of elastic gum, of cork or linen, covered with a layer of wax.

PESTILENCE. *See* PLAGUE.

PETECHIÆ. Dark coloured small spots, like flea-bites, which appear on the skin, but do not rise above it, in bad cases of typhus fever. They always indicate a disease of much malignity, and from their appearance the term *spotted* fever has been applied to typhus. They show the necessity of plentiful stimulants and

cordials, as wine, or even brandy, with the use of the Peruvian bark, and aromatics.

PETROLEUM. A bituminous substance; one species of which, the Barbadoes tar, is sometimes used as an external application in palsies.

PHAGEDENIC. A term applied to ulcers, which spread fast, and consume a great deal of the neighbouring parts.

PHARMACOPŒIA. A book which contains directions for the preparing and compounding of medicines. Such books are generally published under the sanction of the Colleges of Physicians or Surgeons in the different nations of Europe.

PHARMACY. The art of preparing and compounding substances to be used for medicinal purposes. Pharmacy includes a great many operations necessary to be used on the various drugs we possess, such as drying, pounding, mixing, boiling, dissolving in spirituous, or other solvents, combining with certain substances, either those of an active kind, or with others, merely to serve for conveying into the system those which are active. It also includes the art of preparing the various plasters and ointments.

PHARYNX. The upper part of the gullet, or the back part of the mouth.

PHLEBOTOMY. Venesection. The act of opening a vein. *See* Blood-letting.

PHLEGMATIA DOLENS, *or White Leg.* The swelled leg which often occurs to women after child-birth. It is a tense, clear swelling of one of the limbs, generally beginning at the upper part, and increasing pretty quickly; the pain is considerable, and accompanied with fever. It occurs a few days after delivery, and commonly begins at the groin, the hip, or top of the thigh, being preceded by shiverings, and some feverish symptoms. There is pain, weight, and stiffness, and difficulty of moving either the body or lower limb. The part complained of is generally hotter than natural, a little swelled, but not discoloured; at length the pain and swelling increase, and extend to the leg and foot: at which time the pain diminishes, except on motion. The whole extremity is now swelled; but it does not, like a dropsical swelling, change its bulk by posture, nor does it pit upon pressure, being tense, elastic, and very painful when touched. After continuing for some days, the pain and swelling abate; at first in the upper part of the limb, and afterwards in the leg and foot. When the acute symptoms are over, the patient feels much weakened, and the limb is stiff, heavy, and weak. It seldom returns to its former size, but remains through life stiff and enlarged, and easily susceptible of cold. Phlegmatia dolens is tedious in its progress, and difficult of cure; but it rarely goes on to suppuration or gangrene, though instances sometimes occur of these troublesome or fatal terminations.

Treatment. We are to observe whether the disease be alone, or accompanied with any feverish, or other affection, and to proceed accordingly. If the inflammatory symptoms are high, a general bleeding may be proper, as also purging, and antimonials; but such evacuations would evidently be misapplied, if the patient be debilitated by floodings, or previous illness. If the swelled leg be the primary object of our care, one of the best applications at the beginning, is to foment the parts with flannels wrung out of hot vinegar, continuing this for many hours together; assisting its effects by giving purgative medicines of considerable activity. Other fomentations may be used, as the muriate of ammonia, or solution of sugar of lead. Leeches may be applied in considerable numbers, and their bites covered with an emollient poultice, to encourage the bleeding When the acute symptoms are over, we are to attempt the diminution of the swelling by frictions with camphorated oil, or other stimulant liniments; and when the general health and strength will admit of it, a brisk purgative may be given, such as jalap, gamboge, or scammony, which have a tendency to act

on the lymphatic system. When the swelling continues long and obstinately, mercurial ointment may be rubbed on the limb, both for the sake of the local effect, and to bring the system in some measure under the influence of mercury.

PHLEGMATIC. *See* TEMPERAMENTS.

PHOSPHATE OF SODA. A neutral salt of a purgative quality, valuable on account of its not having the nauseous taste of some other purgative salts; and, therefore, being fitter for delicate stomachs. It may be given in broth or beef-tea; and if we season these liquids with it instead of common salt, it will scarcely be perceived that we are giving medicine. To compensate for this useful property, we must add, that its price is considerably greater than Glauber's salts, or Epsom salts. The dose of phosphate of soda, is from four drachms to an ounce.

PHRENITIS. PHRENZY. *See* BRAIN. *Inflammation of.*

PHTHISICAL. Consumptive.

PHTHISIS PULMONALIS. Wasting of the lungs. *See* CONSUMPTION.

PHYSIOLOGY. If we consider this word according to its derivation, it means a discourse concerning Nature; but it is now generally employed to denote that science which explains the functions of organized beings, whether animal or vegetable. Hence we have animal and vegetable physiology. The physiology of man signifies any discussion concerning the animal, vital, or natural functions of the human body. It endeavours to explain the manner of digestion, with the changes which the food undergoes in the stomach and intestines; the way in which the prepared chyle is conveyed to the mass of blood, and incorporated with it in the circulation through the lungs. It describes the modes and uses of respiration, the circulation of the blood, secretion, and growth or assimilation. Physiology describes also the impressions made on the organs of the senses by external objects; it attempts to trace the effects of the mind on the corporeal frame; and to explain the phenomena of sleep and waking, of sympathy and habit. Muscular motion, as well in its hidden causes, as in its striking effects, furnishes a fruitful topic to the physiologist. All the above functions pertain to man as an individual; but those which are connected with the preservation of the species, present a train of investigation which has occupied, but not rewarded, the researches of the greatest physiologists. The history of the embryo, of gestation, of labour, and of the nourishment of the child by the milk secreted in the breasts of the mother, nearly complete the objects of physiology.

It will be readily seen, of how great importance the science of physiology is, to the general philosopher, as well as to the surgeon and physician. As comprising the natural history of the most important of living beings that inhabit our globe, as furnishing the natural theologian with the most beautiful and instructive illustrations of wisdom and design in the Author of nature, physiology ranks high among the objects of human knowledge; while the physician who is not intimately acquainted with the manner in which the body performs it functions in health, cannot be competent to understand the phenomena of disease.

PILES. Painful tumours in the neighbourhood of the anus. Sometimes they are situated externally, and are found in clusters, hard, painful, and giving great inconvenience by their preventing the person from sitting; at other times they are within the gut, and are forced outwards with great pain when the patient goes to stool. Sometimes they are situated so far up, that they do not appear externally at all, but indicate their presence by very great pain, or by the discharge of blood. Sometimes the pain attending piles is less, and the principal inconvenience attending them is the discharge of blood, either pretty constant, or when a person goes to stool. In some cases, very large quantities of blood are

lost in this way. Sometimes, instead of blood, a whitish fluid is discharged.

Causes. It is not easy in every case to say what is the cause of piles. Few persons who have attained middle age are totally free from them, but in some they are more troublesome, and require more attention than in others. Those who are frequently in a standing posture, who are subject to costiveness, and those who are much in the habit of taking purgative medicines, especially of aloes, are very liable to have piles. Pregnant women are very often troubled with piles.

Treatment. When persons have very suddenly got rid of piles, it has not unfrequently happened, that they have experienced various symptoms of ill health, particularly those arising from fulness of blood, as apoplexy, and the like. It has in consequence been a maxim with some physicians, that it is salutary for a person to be affected with piles, and that they should not be meddled with, unless the discharge of blood be so profuse as to endanger life, or to bring on a debilitated habit and dropsical tendency. But as piles are both painful and disagreeable, as an overfulness of the system may be prevented by other means more safe and more cleanly, as we cannot regulate diseases, and make them produce just the change in the system we want, and stop when we wish them, it is better to include piles in the catalogue of maladies, which we are to cure as speedily and as safely as we can. When piles are not so bad as to require the assistance of the physician, but still so troublesome as to annoy the patient, he should be taught to moderate their symptoms by avoiding costiveness, by abstaining from long continuance in the erect posture, from riding, and all other violent exercise, that requires much exertion of the muscles of the trunk of the body. As costiveness is one of the most common causes of piles, this is to be very carefully obviated; and one of the mildest and safest medicines for this purpose is an electuary composed of equal parts of sulphur and cream of tartar, mixed up with syrup or treacle; a teaspoonful of which is to be taken every evening. The saline purgatives, in small and much diluted doses, may answer better with some; and it is to be remembered, that we do not want full purging, but merely such a degree of laxity of the intestines as shall prevent the patient from having hard and large fæces to evacuate. The aloetic purgatives are considered as likely to irritate the parts about the anus, and therefore they are to be avoided. A very essential particular to the comfort of the patient is, that he learn the way of replacing the portion of the gut which is almost always protruded, and that with great pain; and it often happens, that very numerous piles may be kept inside of the rectum without giving much uneasiness, while by neglecting their replacement, they will be for many hours strangled, and perhaps not cease their smarting till the next stool brings a renewal of the acute pain and bleeding, with all their inconvenience. When the pain and swelling about the anus are very severe, we are to apply leeches to the neighbourhood of the part, or to open some of the largest of the tumours by the lancet; and by squeezing out a quantity of black coagulated blood, their bulk is diminished, and considerable relief obtained. When the system in general is affected, as with feverish symptoms, dyspepsia, gout, fulness, headach, giddiness, and a tendency to apoplexy, it may be proper to take a bleeding from the arm, to purge smartly by saline purgatives, and to open an issue in some convenient place. When a great quantity of blood is lost, it will be proper to confine the patient to the recumbent posture, to evacuate the bowels by castor oil or some mild but effectual laxative, or by a clyster; and as soon as we have accomplished this, to give an astringent mixture made with catechu and mucilage of gum arabic, adding such a quantity of tincture of opium as we judge convenient. It may be proper also to use astringent clysters, and

when we have for the present succeeded in restraining the bleeding, we must take particular care so to manage the food and medicines of the patient as not allow of the accumulation of hardened stools, the difficult evacuation of which would renew the bleeding from the tender vessels in the neighbourhood of the anus. If the patient has unfortunately been so long of applying for help that a dropsical tendency has taken place, we are to combat the debility by nourishing diet, by bark and wine, by elixir of vitriol, preparations of iron, and other tonics.

The piles of pregnant women generally go off after delivery; but as they give a great deal of uneasiness before that period, and add to their sufferings during labour, it is always proper to pay great attention to the state of the bowels during the latter periods of gestation.

PILLS. Such medicines as are of an active quality in small bulk, and of a very bitter and nauseous taste, are administered in the form of pills. Sometimes the substance itself is of such consistence that it can be formed into a pill, as opium, or the extract of gentian; at other times we may add something else to give it bulk and consistence; thus we add soap to form aloetic pills, or liquorice powder and mucilage of gum arabic, or crumb of bread, to other active substances. Pills in general keep their virtues a long time, but some of them become so very hard that they are dissolved with great difficulty in the stomach; and consequently, either do not act at all, or take long time to do so. A number of very useful pills are directed in the Pharmacopœia, and are kept ready made in the shops, as the aloetic pills, or the pills of aloes and colocynth, for opening the bowels; the compound rhubarb pills, commonly called stomachic pills; the pills of aloes and assafetida, known by the name of hysteric pills, from their utility in the flatulent state of the bowels, which generally attends hysteria; and the squill pills, useful as an expectorant. The common weight of pills is five grains, and in general two are taken for a dose. Some people have an unconquerable reluctance to take pills, and we are compelled to give their component parts in other forms.

PIMENTA. Allspice, Jamaica pepper. *See* PEPPER.

PINE-APPLE, *Bromelia Ananas*. A delicious fruit growing between the tropics, and cultivated in hothouses in this country on account of its supereminent excellence. It has the common virtues of tropical fruits, being juicy and refrigerant; as such it may be allowed in certain fevers, at least in their inflammatory stage; but where there is a tendency to looseness or dysenteric symptoms, it is prudent to avoid its use; and new comers to the tropical regions must be on their guard against its temptations, as an indulgence in the use of the pine-apple very often brings on dysentery.

PISA, in Tuscany, "has long had the reputation of being one of the mildest and most favourable climates in Italy for consumptive patients. The town is built on the banks of the Arno, about five miles from the sea-shore. The surrounding country is flat, except towards the north, where a range of hills shelters Pisa in some measure from the winds of that quarter. It is also protected, in a considerable degree, from easterly winds, by the lower Tuscan hills. The Arno, in flowing through Pisa, makes a semicircular sweep to the north, so that the buildings on the northern bank of the river (*Lung' Arno*) assume the form of a crescent facing the south, and shelter the greater part of the broad space between them and the river from northerly winds. This is the principal, and certainly the best residence for delicate invalids. Pisa is not so warm as Rome in winter, and is hotter in summer. In *winter*, it is 7° warmer than London, and 2° warmer than Penzance. In *spring*, it is 8° warmer than London, and about 7° warmer than Penzance. For invalids who are almost confined to the house, or whose power of taking exercise is much limited, Pisa offers advantages over either Rome or

Nice; the Lung' Arno affords a warm site for their residence, as well as a sheltered terrace for their walks. But they must be careful to confine themselves to it. They should not venture into the cross streets before April. (Dr. Clark *on Climate.*)

PITCH is obtained from the *pinus* or fir-tree. A conical cavity being dug in the earth, communicating at the bottom with a reservoir, billets of fir-wood are placed both to fill the cavity and to form a conical pile over it, which is covered with turf and kindled at the top. This wood is made to burn downwards, and is converted into charcoal, and the smoke and vapours are made to descend into the excavation in the ground where they are condensed, and pass into the receiver with the melted matters, and this mixture is called *Tar.* By long boiling, tar is deprived of its volatile ingredients, and then denominated *Pitch.* Pitch is used as an external application in scalled head, and some other diseases of the skin, either by itself or mixed with the citrine ointment; and pills of pitch have been given in certain stages of consumption, with strong assertions of their utility. The vapour also of pitch or tar has been diffused through the apartments of consumptive patients, and the inhaling of this vapour has also been thought of service in such cases.

PITCH, Burgundy. A resinous matter obtained by exudation from various kinds of fir-trees, when an incision is made through the bark into the wood. Burgundy pitch gives its name to a plaster, composed of itself and various other resinous and aromatic substances. It is a very common popular application in pectoral complaints, in disorders of the liver, and in rheumatic affections. Its good effects, which are unquestionable, are to be ascribed to its keeping a degree of warmth, and so acting the part of a mild stimulant and blister, without going the length of either reddening the skin or occasioning a collection of serum, as mustard-poultices or Spanish flies do.

PLACENTA. *See* Afterbirth.

PLAGUE. A febrile disorder of great malignity, prevailing in various countries of the world, and spreading by contagion, which affects more especially the nervous and glandular systems. Soon after the infection is received, the patient is seized with rigors, succeeded by heat, great sinking of the spirits, loss of strength, trembling, fainting, giddiness, headach, and delirium, with a weak and irregular pulse. Soon there ensues vomiting of a dark matter; the breath is uncommonly fetid; and as the disease advances, fiery carbuncles make their appearance, various glands swell, as those in the groin, the neck, and under the arm-pit; numerous spots or livid marks, as of stripes, appear in different parts of the body, or a discharge of blood, or a wasting looseness takes place, with other marks of weakness and putrescency. The above symptoms do not all occur in the same patient.

Prognosis. The plague is a disease of the utmost danger. The extreme fatality with which it used to be attended in this country and in France, is supposed to be owing to the patients having been neglected through the terror of their neighbours; as a considerable proportion of those who are attacked in the East are said to recover. In the French army in Egypt, about a third recovered. The duration of the complaint is various; sometimes the malignant contagion is so concentrated, that persons have been knocked down and killed, on opening bales of goods which have come from infected places. Some have died in a few hours, others have lived a week or a fortnight. The earlier that buboes appear, the disease is likely to be the milder. When they suppurate kindly, they appear to be critical, or to carry off the disease. A general perspiration breaking forth, has appeared salutary. When the carbuncles put on a gangrenous appearance, the event will probably be fatal; as also when there are signs of great putrescency, as petechiæ, bleedings, and diarrhœa.

Treatment. When a person who has been exposed to the contagion of plague begins to feel unwell, it is proper to remove all undigested aliment from the stomach by giving an emetic, taking care that it do not produce excessive and exhausting nausea after the evacuation; and this, if it happens, is to be allayed by giving effervescing draughts, or a small quantity of laudanum. It will be proper also to empty the bowels by some mild, but effectual purgative, avoiding diarrhœa, on account of the great weakness which we may expect in the course of the disease. Some have proposed and practised bleeding, but with very bad success. A gentle perspiration has appeared in some cases to carry off the disease; and we may attempt this by antimonial medicines, or the diluted acetate of ammonia; but profuse debilitating sweats are highly pernicious, and must by all means be avoided. The experience of late years, and the happy terminations of some unintentional experiments made by patients, who in delirium or despair made their escape from camps and hospitals, and were exposed to cold air or cold water, have occasioned a proposal to treat patients in the plague by the application of the cold affusion, as in typhus fever. Instances have occurred, where persons in delirium have thrown themselves into the sea or a river, and been taken up nearly free from complaint; and others have wandered about, exposed to the cold dews of the night, and returned to the camp in health. The other remedies proper to be given in the plague, seem to be pretty nearly the same as those for the bad kinds of continued fever, viz. the mineral and vegetable acids; diminishing the heat of the body by prudent sponging with vinegar and water; giving medicines to allay irritation and procure sleep, as camphor or opium; frequently changing the bed and body-linen of the patient, and quickly removing all offensive matters from his apartment. The buboes and carbuncles must be treated in the way described under those articles.

Prevention of the Plague. It is a matter of extreme importance in every country, to prevent the plague from breaking out among its inhabitants; and happily this is in a considerable degree within the power of legislation, except in those Eastern regions which are its birthplace. The great means of spreading the plague, is by the contact with infected persons, or the contact of substances to which the pestilential infection adheres, as clothes, cotton, furniture, papers, and the like. The introduction of these from countries where the plague is known to be, is prevented by shutting out all communication; in inland countries, by guards or cordons of troops; and in maritime states by the quarantine laws, interdicting all communication with vessels coming from those countries for a certain number of days, and carefully fumigating every letter, and piece of goods that comes out of them. When the plague has broken out in a place, every effort must be made to destroy the contagion, and to prevent its spreading. For this purpose, lazarettoes, or plague hospitals should be formed, to make a complete separation between the sick and the healthy. Those who must of necessity be employed about the sick, should avoid unnecessary contact or nearness to them, should pay much attention to cleanliness, and should often change their clothes, and wash their hands with warm water and vinegar. Much attention should be paid to ventilation, and the sound should, on such occasions, keep to windward of the sick. All putrid matter, and discharges from the bodies of patients should be immediately removed from their apartments, and dead bodies should be very speedily buried or committed to the deep. All debilitating agents should be avoided, as intemperance, depressing passions, violent exercise, night watching, poor diet, and weakening evacuations. Any thing worn about the person, however insignificant in itself, if it gives confidence to the patient, will be of service in enabling him to resist contagion; hence, camphor,

vinegar, or any aromatic, may sometimes act as a preventer of the plague. Friction of the body with oil, has obtained the reputation of a positive antidote, and some have gone so far as to say that there is no instance of a person who has dealt much in the handling of oil, who has been attacked with the plague. It is certainly a very innocent measure of precaution, and as such it ought not to be neglected. It has been said, that friction with oil has cured the plague when the infection has been received, but this is by no means probable. Inoculation with the matter of carbuncles has been in some rash instances attempted, but with fatal results; and as persons may take the disease twice, inoculation, even if it rendered the disease in the first case mild, would not deserve to be practised. The serious inconvenience of ships and passengers being obliged to perform quarantine, renders it an interesting inquiry how far quarantine laws are necessary; and though the unjustifiable assertions of some medical men with regard to the non-contagious nature of the plague should be totally disregarded, it may be allowable in some instances to make the period of quarantine less than forty days, using the fumigation and all the proper precautions that experience has shown to be necessary in such cases.

PLANTAIN-TREE, *Musa Paradisiaca*, grows in India and South America. It is a herbaceous tree, growing to the height of fifteen or twenty feet. The fruit are nearly of the shape and size of ordinary cucumbers; and when ripe, of a pale yellow colour, of a mealy substance, a little clammy, with a sweetish taste, and will dissolve in the mouth without chewing. When they are brought to table by way of dessert, they are either raw, fried or roasted; but if intended for bread they are cut before they are ripe, and are then either roasted or boiled. (Hooper's *Medical Dictionary*.)

PLASTERS are combinations of oily and resinous matters of considerable tenacity and consistence; which may have various substances combined with them, according to the use for which they are intended. Some plasters are applied to the sound skin, as the Burgundy pitch plaster, or the strengthening plaster; where they produce their effects, whatever they be, without breaking the skin, probably by the support they communicate to the skin and internal parts. Thus, though the oxide of iron enters into the composition of the *Emplastrum roborans* or strengthening plaster, it is impossible that any good can result from the tonic virtues of the iron. The blistering plaster is intended to raise the cuticle in a blister; and the adhesive plaster is fixed on sound skin, and passing over a wound or ulcer, is intended to bring its sides together, and to support the neighbouring parts. The mode of treating ulcers of the legs by straps of adhesive plaster, has been found very successful. Other plasters are applied over indolent sores, being spread with some irritating substance to excite a proper healthy action.

PLETHORA. The medical term for fulness of the system. This is a state which is not desirable, as it disposes the body to many diseases. A plethoric state is marked by plumpness, fulness of countenance, a high colour, frequent dimness of sight, ringing of the ears. It is often accompanied by corpulency, and a great accumulation of fat about the belly. It is generally the consequence of high living, of indolence and want of exercise, with much indulgence in sleep and luxury. There are some who, without any fault of their own, become plethoric; but, in general, it may be avoided by moderate living, by taking sufficient exercise, and by keeping up the regular employment both of body and mind. Plethoric people are liable to a long train of dangers and inconveniences. They are apt to lose breath, or to perspire on the slightest exertion; they are subject to headach, vertigo, palsy, and apoplexy; to bluntness of all their faculties, to stomach complaints, to low spirits, and a

variety of other uncomfortable sensations. It is not a good plan for a person of a full habit of body to attempt to get rid of it by bleeding. This rather tends to increase the evil, and begets a necessity for its own repetition. Plethoric persons are apt to faint, even after a very small bleeding. In addition to regimen and the care of the general health, frequent purgatives are proper, and a course of mineral waters is often very salutary.

PLEURA. The membrane which invests the lungs, and which is reflected to line the inside of the ribs, and other parts of the parietes of the chest. It is a serous membrane, and is very liable to acute inflammation. Of the symptoms and treatment of this disease, we have given an account under Lungs, *Inflammation of.*

PLEURITIS. Inflammation of the *Pleura.* *See* the preceding definition.

PLICA POLONICA, Plaited Hair. A disease in which the hairs are thicker than usual, and so entangled that it is impossible to separate them. It is endemic in Poland, Lithuania, Hungary, and some of the neighbouring countries. There appears to have been a great deal of ignorance and prejudice respecting this disease; it has been said to be contagious, that the discharge by the canals of the hair is critical, and cannot be checked without danger. Baron Larrey, when at Warsaw with the French army, carefully investigated the nature of this disease, and was fully satisfied that it is a local and factitious complaint, produced by dirt and neglect; likewise, that it is not contagious, and may be cured with safety, notwithstanding the absurdities which prejudice has set forth to the contrary. The head is to be shaved, and an ointment applied, made of equal parts of sulphur ointment and pitch ointment, and the head is to be frequently washed with soap and water. Mercury, rubbed in with hair-powder, is good for destroying the vermin. Internal remedies, as Plummer's pill, or small doses of calomel, may in some cases be necessary.

PLUMMER'S PILLS. A medicine composed of antimony and mercury, contrived by Dr. Plummer of Edinburgh, and used as an alterative in general derangement of the health. The dose is one or two pills night and morning.

PLUMS, *Prunus domestica.* A stone fruit, pleasant to the taste, much used for tarts and pies, but unwholesome and indigestible with many, even when ripe. When unripe, they almost certainly produce colic, looseness, cholera, or dysenteric symptoms. When dried, they are called prunes; and these, when boiled, alone or with senna, are used as a laxative.

PNEUMONIA. *See* Lungs, *Inflammation of.*

POISONS may be defined to be substances, which, applied to the animal body in very small quantity, with considerable certainty destroy life. The investigation of the numerous substances which have this power, and their chemical and medical history, with the means of counteracting their effects, forms a very extensive and important branch of science, known by the name of *Toxicology*; which has of late years been diligently cultivated, and which has given us juster views than we formerly had, of the action of various poisons and their remedies. Different poisonous substances produce their effects on the body in very different modes, and those effects are to be explained in almost every case by the operation of the vital powers; sometimes by chemical laws, and very rarely by mechanical action. Poisons differ in their action according to the parts to which they are applied. The poison of the viper and other snakes, will kill in a very short time, when introduced into a wound, but may be taken into the stomach without any injury; while others, as the caustic alkalies and acids, corrosive sublimate of mercury, and some chemical substances, exhibit their deleterious action on the stomach. Other poisons are equally destructive to whatever part they

may be applied, whether to the stomach, the lower part of the bowels, the mouth, the eye, or to an abraded portion of the skin. There are poisons also which exist in the form of gas, and can be received by the breath or by the saliva; the most remarkable instance of this is the very concentrated contagion of certain diseases, as the plague or other fevers.

Various classifications of poisons have been proposed. A very obvious one is that which arranges them, according as they are derived from the three kingdoms of nature, animal, mineral, or vegetable; or they may be classified from their apparent and most obvious effects.

Dr. Christison, in his late excellent Treatise on Poisons, arranges them in three classes: I. The *Irritants*, which include all those poisons whose sole or predominating symptoms are those of irritation or inflammation. II. The *Narcotics*, those which produce stupor, delirium, and other affections of the brain and nervous system. III. The *Narcotico-acrids*, those which cause sometimes irritation, sometimes narcotism, sometimes both together.

I. The class of irritant poisons comprehends both those which have a purely local, irritating action; and, likewise, many which also act remotely, but whose most prominent feature of action is the inflammation they excite wherever they are applied. This class comprehends five orders: 1. The acids and their bases, as the sulphuric, nitric, muriatic and phosphoric, with their bases, phosphorus, sulphur, and chlorine; with these may be likewise arranged iodine and its compounds, and also oxalic acid. 2. The alkalies and their salts, potash and its carbonate, nitre, lime, ammonia, and sulphuret of potash. 3. The compounds of the metals, viz. the oxides and salts of arsenic, mercury, copper, antimony, tin, silver, gold, bismuth, zinc, and lead. 4. Various genera from the vegetable kingdom, as some of the drastic purgatives, elaterium, gamboge, colocynth, savine; and some animal matters, as cantharides, fish-poisons, the poison of serpents, and animal matters become poisonous by disease or putrefaction. 5. Mechanical irritants, as copper, iron, glass, and the stones of fruit, which sometimes produce inflammation and death, though they are often swallowed with impunity.

II. The narcotic class contains opium, henbane, cherry-laurel, peach-blossoms, bitter almonds, and the prussic acid, on which the bad properties of several of these vegetables depend. Some of the poisonous gases are comprehended under this head, as carbonic acid gas, chlorine, ammonia, and sulphuretted hydrogen gas, which last sometimes proves fatal to those employed in cleaning out drains.

III. The narcotico-acrids possess a double action, the one local and irritating, the other remote, and consisting of an impression on the nervous system. They are all derived from the vegetable kingdom. The principal of them are deadly night-shade, thorn-apple, (*datura stramonium*) and tobacco; hemlock, water-lock, monks-hood, black hellebore, nux vomica, poisonous mushrooms, foxglove, &c. camphor, cocculus indicus, &c. Another arrangement has been proposed, according to the different primary operations by which they produce their effects; whether as acting through the medium of the nerves without being absorbed, or as entering the circulation, or as producing a direct local action on the alimentary canal. The details of this classification would be too subtile for the general reader.

The subject of poisons was long involved in great mystery, and was the object of much credulity among mankind. Many superstitious terrors were connected with it, and the writers of poetry and romance lent their helping hand to confirm the popular delusions regarding poisons. It was believed that it was possible to introduce into the system, a poison so nicely adjusted, that it would procure the death of an individual at any given moment, weeks, or months, after it had been administered; that it could be conveyed by means of snuff, or

letters, or gloves, or various other ways equally unsuspected. Some atrocious occurrences which happened in France during ten years of the most splendid part of the reign of Louis XIV. spread great alarm on the subject of poisons. Many persons of rank connected with the profligate court of that monarch, were believed to have employed poison to accomplish their purposes of love, ambition, or revenge. The secrets appear to have been first vended by a ruined alchymist of the name of Exili; and from 1670 to 1680, so many crimes were perpetrated, and so many persons accused, that a particular tribunal was erected for the trial of poisoning, and obtained the name of the *Chambre Ardente*. Several persons who were convicted of selling *succession-powder* were burned at the Place de Grève. Several individuals of rank also, suffered by the hand of the executioner, for poisoning some of their relations and others. Before leaving this horrible subject, we may state, from Dr. Christison, the supposed effects of "the celebrated *Aqua Toffana*, or *Acquetta di Napoli*, a slow poison, which in the sixteenth century was believed to possess the property of causing death at any determinate period, after months, for example, or even years of ill health, according to the will of the poisoner. The most authentic description of the Aqua Toffana ascribes its properties to arsenic. Hahnemann gives the following account of the symptoms. They are a gradual sinking of the powers of life, without any violent symptom; a nameless feeling of illness, failing of the strength, slight feverishness, want of sleep, an aversion to food and drink, and all the other enjoyments of life; lividity of the countenance. Dropsy closes the scene, along with black miliary eruptions and convulsions, or colliquative perspiration and purging.

"Whatever were its real effects, there appears no doubt that it was long used secretly in Italy to a fearful extent, the monster who has given her name to it, having confessed that she was instrumental in the death of no less than six hundred persons. She owed her success, however, rather to the ignorance of the age than to her own dexterity. At all events, the art of secret poisoning cannot now be easily practised. Indeed, even the vulgar dread of it is almost extinct."

A similar credulity existed with respect to *antidotes*, or substances that had the power of rendering poisons harmless. It was believed that every poison had its own antidote, which was certain of counteracting it; and that a person by taking an antidote in the morning, was secured from danger by poison during the whole day. Much of this credulity about poisons and their antidotes is now done away; and when noxious substances have been swallowed, remedies are applied, with juster views of the animal economy. The cases in which an antidote may be most plausibly suggested is that in which a substance has been swallowed, whose chemical nature is so well known and so much under our power, that we can decompose or neutralize it in our laboratories; thus, if an acid has been swallowed, what is more likely to do good, than giving an alkali? or when a compound salt has been taken, than giving some other to decompose it? But when a substance has once got into the stomach, it is not so easily under our command as if it were in our mortars or vials; some mischief may have been done before our remedy is applied, or the product of our decomposition may be as virulent as the original substances. We are therefore not to trust to chemical, but to vital agents, in our treatment of those who have swallowed poison.

Poisoning, *Treatment in cases of.* When a poisonous substance has, either by accident or design, been introduced into the alimentary canal, three important indications are to be fulfilled. 1. Throwing the substance out of the body as quickly as possible, by vomiting and purging. 2. Decomposing any remaining portion, and endeavouring to prevent its being absorbed. 3. Endeavouring to

prevent the consequences we have reason to fear, whether these be inflammation, stupor, or exhaustion of the nervous energy. 1. To eject the poison from the body is in all cases to be done as speedily as possible. If a mineral acid or a caustic alkali has been swallowed, we may give such agents as will have a chance of neutralizing it; and then vomiting is to be excited by thrusting the finger down the throat, or tickling the back part of the mouth with a feather; or by using the stomach-pump, which, though newly brought forward, is said to have been proposed by Boerhaave. If we can have our choice of emetics, those are the best which act quickly, and do not require to have much diluting fluid taken with them; the white vitriol (sulphate of zinc) given in the dose of thirty grains, or the blue vitriol (sulphate of copper) in the dose of eight grains, in general operate very speedily. If we cannot get these, we must take such as are at hand, antimony or ipecacuan, or mustard, or common salt. 2. To decompose any substance that may not be vomited, and to prevent its absorption, we are to consider whether the substance is in a solid form, and whether it acts by being absorbed; if so, it may not be safe to assist its action by administering to the sufferer any fluid which will dissolve it; and if it be liquid, our plan is to render its active portion insoluble. Hence the necessity of knowing the various agents which exert a chemical effect on the substance swallowed. Corrosive sublimate, and other substances which act locally on the stomach and are not absorbed, are best treated by copious dilution, and afterwards by vomiting. Arsenic is aided in its deleterious effects by magnesia and alkaline solutions, because these render it more soluble; but lime or the carbonate of lime (chalk) forms with arsenic an insoluble substance. When verdegris has been swallowed, vinegar will increase its destructive powers by forming a soluble poisonous salt. If opium has been taken in too great quantity, vinegar and lemonade will assist to dissolve it, and render its operation more speedily fatal; but if the opium has been thoroughly ejected from the stomach, the same or other vegetable acids will counteract the stupor which is almost sure to follow. When we have done all in our power by the use of emetics, their continuance in nauseating doses is to be avoided, as this encourages absorption; and modern experiments have demonstrated that blood-letting also promotes absorption; hence we must not be induced by the appearance of symptoms of inflammation to bleed in cases of poisoning by arsenic. 3. The probable consequences of poisons are to be counteracted according to their peculiar characters. If we anticipate great exhaustion of the nervous energy, most assuredly we must not bleed, but apply ammonia, external warmth, and other stimulants. If we anticipate inflammatory symptoms, our views must be directed to prevent them by purgatives or blood-letting; and if stupor is to be dreaded, vegetable acids, tea, or coffee, may be useful; while high nervous excitement or spasms require the use of opiates.

The substances whose deleterious effects most frequently come under the care of the medical practitioner, are the following: the mineral acids, vitriol (sulphuric acid), aquafortis (nitric acid), oxalic acid, and saltpetre, which two are sometimes given by mistake for purging salts; corrosive sublimate, arsenic, opium, night-shade, preparations of copper, prussic acid in the shape of laurel-water, or in simple solution, or very concentrated; also the salts of lead; hemlock, tobacco. We refer for the treatment of poisoning by the individual substances, to their respective names. *See* VIPER, HYDROPHOBIA, PRUSSIC ACID, &c.

POLYPUS. An excrescence growing in certain cavities of the body, most commonly in the nose, or the uterus and vagina. They are often very troublesome and painful, altering the shape, and impeding the functions of the part in which they are found. They are some-

times with a broad base or attachment, at other times they arise by a narrow neck, and are very subject to bleeding; when cut, unless it be done very completely, and even a portion of the healthy structure taken along with it, they are apt to grow faster than before. They are often in such a situation that they cannot safely be cut, or have caustic applied to them; and the polypi most likely to be safely removed, are those which, having narrow bases or necks, allow of a ligature being put upon them, by which the influx of nourishment being prevented, they drop off.

The clots of blood found in the cavities of the heart after death are called *Polypi*.

POPLITEAL ANEURISM is situated in the artery at the ham. It is believed to occur very frequently in postilions, from the bent position of their knee-joint. This species of aneurism is worthy of mention, as being the one for the cure of which the great modern improvement in the treatment of aneurism was proposed. This consists in putting a ligature on the vessel, at a place far from the aneurismal sack, by which the current of blood is prevented from reaching the sack, and a cure of the disease is effected. *See* ANEURISM.

POPPY, WHITE, *Papaver somniferum*. The plant from which opium is procured. (*See* OPIUM.) A strong decoction of dried poppy heads mixed with as much sugar as is sufficient to reduce it to the consistence of a syrup, becomes fit for keeping in a liquid form, and is called syrup of poppies. It has some of the narcotic and anodyne properties of opium, and is sometimes given to infants in the dose of one or two tea-spoonfuls; but it is a very unequal preparation, and the real quantity of opium which it contains is uncertain; and as Dr. Duncan, junior, observes, it is by no means equal to syrup, to which a certain quantity of solution of opium is added.

An anodyne cataplasm is made of white poppy heads, and it may be rendered more sedative, if necessary, by adding a solution of opium or of the extract. For fomentation with the white poppy, four ounces of the heads are added to six English pints of water, which are reduced, by boiling, to a quart. This is a good application in painful ophthalmia.

PORRIGO, *Ringworm of the Scalp, Scalled Head*, &c. A contagious disease, unaccompanied by fever, principally characterised by an eruption of pustules containing a straw-coloured matter, succeeded by a thin, brown, or yellowish scab. *See* SCALLED HEAD.

PORTLAND POWDER. A composition of vegetable bitters, viz. gentian, centaury, and germander, once famous for its supposed virtues in the cure of gout, but now laid aside from experience of its useless, and even pernicious properties. *See* GOUT.

PORTER is made from high dried malt, and differs from other malt liquors in the proportions of its ingredients, and the peculiar manner in which it is manufactured. It agrees with other malt liquors, in its nutritive properties, in its tendency, when moderately taken, to assist digestion; and when too much indulged in, to occasion corpulency. Dr. Paris thinks, that the accounts, so common of its being adulterated, are very much exaggerated; and that it is at least certain, that such adulterations are not carried on in the caldrons of the brewer, but in the barrels of the publican. We certainly hear a great deal about the quantities of opium, quassia, cocculus Indicus, and other noxious herbs used by the brewers; and it is satisfactory to be informed by such authority, that these useful tradesmen are unjustly accused. Dr. Paris gives the following piece of history respecting porter. "Before the year 1730, the malt liquors in general use in London were ale, beer, and twopenny, and it was customary to call for a pint or tankard of half and half, *i. e.* half of ale and half of beer, half of ale and half of twopenny. In course of time it also became the practice to call for a pint or

tankard of *three threads*, meaning a third of ale, beer, and twopenny, and thus the publican had the trouble to go to three casks and turn three cocks, for a pint of liquor. To avoid this inconvenience and waste, a brewer of the name of Harwood, conceived the idea of making a liquor which should partake of the same united flavours of ale, beer, and twopenny. He did so, and succeeded, calling it entire, or entire butt, meaning that it was drawn entirely from one cask or butt; and as it was a very hearty and nourishing liquor, and supposed to be very suitable for porters and other working people, it obtained the name of PORTER."

PORT WINE. The red wine brought from Portugal, which, when new and unmixed, is rough, strong, and slightly sweet; but when kept in bottle for a proper length of time, loses some of its astringency, and most part of its sweetness; its flavour is improved, and its strength continues. Almost all the port wine which comes to this country, has various proportions of brandy added to it; and to this brandy is to be ascribed much of the heating properties of port wine, discovered both by the palate and the constitution. Port wine loses almost all its good properties when too long kept in bottle. When port wine of good quality is taken in moderation, it is very wholesome; it imparts strength to the muscular system, quickens the circulation, and exhilarates the spirits. When taken in excess, it is one of the worst of wines, and produces most of the pernicious effects of distilled spirits, viz. disorders of the digestive organs, a dull state of the mental faculties, and obstinate organic affections of the liver and other parts.

POTASH. The name of one of the alkalis, which class of bodies are distinguished by their peculiar taste, their power of changing the vegetable blues to green, of neutralizing acids, and forming soaps with oil. As a medicine, potash is of considerable importance. When pure, and deprived entirely of water, it is used as a caustic to destroy the skin for the formation of an issue; or its solution of a definite strength, as directed in the pharmacopœia, given in the proportion of twenty drops to two ounces of water, may be given internally in cases of a tendency to stone or gravel.

POTASH, CARBONATE *of*. Potash is more generally used in combination with the carbonic acid; by which it is rendered milder, and still the alkaline properties to a considerable degree preserved. The carbonate of potash is given in dyspeptic cases, in the dose of a drachm three or four times a-day, in water, or infusion of chamomile flowers; and in cases of stone, ten grains may be given as often. The carbonate of potash is used in combination with lemon-juice, to form the effervescing draughts useful for stopping vomiting, and for determining to the surface of the body.

POTATO. A well known vegetable, the roots of which form so great a proportion of the food of the people of this kingdom. There are some stomachs to which it is rather indigestible, especially when not properly boiled; and in the deranged state of the bowels of children, it should be avoided, whether solid, or boiled down into potato-soup. It is very apt to occasion looseness of the bowels in children, or to increase it when already present; and in such cases we must lay aside the use of potatoes, and give them old bread to eat with the small portion of animal food allowed them. Bread and milk, or sago, or arrow-root, with milk, or a little port wine, must be their principal diet while their illness lasts. Mashing potatoes, does not make them more easily digested; they are thus less intimately mixed with the saliva, when masticated; and it adds to their bad qualities for invalids when they are much soaked with the fat of roast meat. Potatoes should not be overboiled, as this deprives them greatly of their nourishing qualities.

POULTICES are emollient applications applied warm to a part, with a view to relax and soften it, and to promote suppuration by the continuance of a due

degree of heat. One of the best applications of this kind is the common bread and milk poultice, of a consistence thick enough to prevent its spreading farther than we intend, but not so hard as to fret or irritate the skin. In some cases, as when applied over the eye, it may be useful to inclose the poultice between folds of fine linen. Poultices should be applied as warm as the patient can easily bear, and should be changed frequently when it is our object to bring on suppuration quickly. Sometimes the skin round the place where a poultice is put on, is so much irritated as to become covered with fiery pustules. In this case, the poultice must either be changed or discontinued, and dry powders or simple ointment applied to the pustules.

POWDERS. Many medicines are prepared in the form of powders, both vegetable and mineral. The roots of plants, their bark, their resins, their dried leaves, are all capable of being reduced to powder; and many of the alkaline and metallic salts, and earthy bodies, are kept by the apothecary in that form. It is rare, however, that they can be administered in the form of powder, and there are therefore various ways of dispensing powders. When their taste is very nauseous, and when a small quantity acts strongly, they are formed into pills; when any portion of them is heavy, as calomel, it may be given mixed in jelly, honey, or conserve of roses; when it does not greatly exceed the weight of water, it may be given in water or tea, or beer, or thin gruel, stirring it before it is drank. Some medicines are given in the form of powder, because, to obtain their full effects, a combination of all their principles is necessary. This is the case with Peruvian bark, jalap, ipecacuan, and some others. Some medicines answer best when they are not reduced to the utmost degree of fineness, as bark, rhubarb and guaiac, with some aromatic substances, which seem to lose some essential part by a very minute division. There are some substances used in medicine, which are best reduced to powder by the addition of some other substance. Thus opium is powdered with ipecacuan and a salt called the sulphate of potash, to form the sweating powder known by the name of Dover's powder. The salt is of no virtue in itself, but answers well by the hardness and insolubility of its particles to divide the viscid opium more completely. The compound powder of jalap is composed of one part of jalap and two of cream of tartar; and one use of the latter ingredient is to obtain a perfect division of the particles of the jalap. Myrrh, gamboge, and some other vegetables not easily powdered, have this operation much facilitated by being mixed with sugar or some hard gum. Camphor is easily reduced to powder by the addition of a few drops of spirit of wine.

There are several salts which it might be desirable to mix together and reduce to powder, but which, when beat in a mortar, become moist and are dissolved. The cause of this is the escape of what chemists call the water of crystallization. Thus if we mix carbonate of ammonia and sulphate of copper together, both dry powders, the result will be a fluid mass, and the extrication of gaseous matter. Those who direct the combinations of medicine should therefore be aware of their chemical changes, that their purposes in joining medicines may not be disappointed.

There are certain powders frequently used in medicine which are not soluble in the stomach. Magnesia is an example. If it meets with an acid in the stomach, it forms a soluble salt which acts properly enough on the bowels; but if given in too great quantities, it may form concretions in the bowels, and be attended with danger. Powdered bark has been attended with the same effect. The bowels should therefore be carefully attended to in all cases where insoluble powders are used, especially in children. On this subject it has been remarked, that the sugared plums sold to children, consist very frequently of plaster of Paris, or stucco, an

insoluble substance, which, introduced into their tender bowels, may be productive of much mischief.

PRECIPITATE. When a chemical mixture is made among several substances held in solution, and one of them being insoluble, after the mixture, falls to the bottom, it is called a precipitate. The substance commonly called *Red Precipitate*, is an oxide of mercury, which is used as an escharotic, and is a very common application to chancres. When mixed with lard, in the proportion of five grains of the precipitate to a drachm or a drachm and a half of lard, it forms a very valuable stimulating ointment, which is useful in various kinds of ophthalmia. For whatever purpose it is used, it should be very finely powdered.

PREDISPOSING CAUSE, *or* PREDISPOSITION. The circumstance which produces in the constitution a tendency to any particular disease. Thus, the *predisposing* cause of pleurisy is a certain degree of health and vigour in the system, which may be pushed to disease by cold as an *exciting* cause.

PREGNANCY. The state of pregnancy is that condition of the female constitution from the time of conception to that of delivery. Though it is a state the very reverse of disease, many changes take place, and various uneasy feelings arise, which in some constitutions are exceedingly troublesome; and incapacitate the individual from all enjoyment of health, or performance of the duties of life. It may not be superfluous to enumerate the principal circumstances demanding attention or medical aid, as also the method of management for women during pregnancy. Before proceeding to this, we may enumerate some of the signs which indicate a woman to be in that state, premising at the same time, that no single symptom can be relied upon, and that even their combination does not ensure certainty.

PREGNANCY, *Signs of.* It is an almost invariable fact, that while the monthly flux is regular, the woman is not with child; and therefore one of the first signs of pregnancy is the cessation of that discharge. It is to be remembered, however, that obstruction of the discharge may often happen from many other causes, and therefore it cannot be depended on as a sign of pregnancy unless other symptoms follow. Some derangement of the digestive organs takes place, sickness or vomiting, especially in the morning; heartburn, costiveness, disturbed sleep, and in some cases, irritability of mind and fretfulness of temper. The dark circle round the nipple becomes of a deeper shade, the breasts afterwards become enlarged and harden, and towards the end of the period of gestation, a milky fluid is secreted in them. Sometimes the woman becomes pale, and has a livid line at the lower eyelid. Some become rheumatic, and take headach, toothach, or other kindred symptoms. There is a progressive increase of the size of the belly; but it has not unfrequently happened, that women have supposed themselves pregnant when they were not so, and yet that the belly has gone on increasing in size; sometimes from their getting fat by good living and the want of exercise, at other times from dropsical or other diseases, and occasionally from causes quite undiscoverable. Towards the end of the fourth month, the woman perceives a fluttering sensation, occasioned by the motion of the infant. In common language, the child is said to *quicken*; but we are not to suppose, that this is the first moment of its becoming alive. It had been so, long before, though the smallness of its size and its limited degree of motion had rendered the signs of life indistinct and imperceptible. This fluttering motion may be imitated by flatulence, which often causes mistake and disappointment. Fainting sometimes seizes the mother about this period. The appearance of the blood drawn from pregnant women, after it has stood for a time, in a degree resembles the blood drawn in inflammatory diseases; but this appearance is by many circumstances rendered a fallacious test of pregnancy.

It appears, therefore, that in the early months, it is very difficult to ascertain, beyond a doubt, whether a woman be pregnant or not; and practitioners should always be extremely cautious in giving their opinion. A rash announcement that the woman has been deceiving herself, may give such a shock to the feelings, as to be productive of the most lamentable consequences; and with respect to the management of doubtful cases, it is always safest to treat them as if the woman were pregnant, till time puts the matter out of question; as fatal consequences might result both to the mother and child, by an attempt to get rid of tumours or any apparently morbid symptom, by violent medicines, or other means.

I. *Disorders in the Early Months.* *Vomiting, sickness, heartburn,* and other symptoms of indigestion very often require attention in the early months. When the woman is otherwise healthy, the sickness is not to be treated with any very powerful remedy; no brandy or laudanum should be allowed, but it must be moderated by abridging the diet, by taking little at a time, and by confining the patient to those articles of food which she has experienced to agree with her. If the heartburn is attended with a constant desire to hawk up phlegm, it may be advisable for once to clear out the stomach by an emetic. Afterwards, the bowels are to be carefully attended to; and a little bark and sulphuric acid to be taken twice a-day. When the heartburn is accompanied by a sour taste in the mouth, with sour belchings, it is to be palliated by magnesia, or prepared chalk, or lime-water, and the bowels are to be kept easy by castor oil, by senna, rhubarb, or other mild laxatives.

Swelling and Pain in the Breasts. Sometimes in the early months, the breasts become swelled and very painful, especially in those who are in good health, and of a full habit of body. Great care should be taken that no part of the dress be tight over the breasts, and that the stays do not press upon them. The breasts are to be rubbed with a little warm oil, twice or thrice a-day, and they are to be covered with soft flannel. The bowels are to be kept open, and in those who are very full, a little blood may be taken from the arm.

Longings. Women in the early stage of pregnancy, sometimes have capricious longings for unusual and improper food, and other things. Many of them know the absurdity of their wishes; others think they should be gratified, lest the child bear the marks of the thing longed for. This fear is groundless; but it is prudent as well as good-natured, to indulge women, while in the pregnant state, with whatever is not likely to be prejudicial to their health.

II. *Disorders in the Latter Months.* *Costiveness* is a state that ought to be most carefully guarded against; and in the state of pregnancy, no person should allow two days to pass without an evacuation. The bowels may be kept easy by attention to diet, using a considerable proportion of vegetable food; and by taking some laxative medicine. An occasional clyster, after long costiveness, may be useful, but women should never allow their bowels to get into this torpid state; as it is productive of much general derangement to their health, occasioning heat and flushing, feverishness and irritability; and may demand very unpleasant manual interference to break down the hardened mass. When laxative medicines are taken, their effect may be to increase the slimy discharge from the bowels, while their feculent contents are not dislodged; this must be carefully looked after, and purgative medicines that act slowly but effectually, must be resorted to, such as aloes alone, or with rhubarb, scammony, or colocynth; and those followed up by neutral salts, by senna, or the compound powder of jalap.

Looseness. If the bowels are very loose, the appropriate remedies for diarrhœa must be applied. It will be right to give a laxative medicine to clear the bowels of any irritating substance, and

afterwards to give small doses of rhubarb or catechu; taking care that we do not bring on again the opposite state of costiveness.

Piles. These are small tumours at the end of the rectum; when seen out of the body they are called external; when they keep within the gut they are said to be internal. These last generally give most pain. We judge that there are internal piles, when there is great pain at the lower part of the gut on going to stool, or when the person walks. Piles are called blind when they do not bleed, and these are always the most painful. Pregnant women not unfrequently suffer much inconvenience from piles. They are to be prevented and mitigated by avoiding costiveness, by the use of mild laxatives, as sulphur and cream of tartar, and by avoiding the standing posture or much walking. An ointment made of two parts of litharge ointment and one of powdered galls, may be rubbed on the piles; and if there be much swelling, with great pain and feverish symptoms, leeches may be applied to the parts, and the bleeding encouraged by fomentations. The bleeding piles seldom require much attention, except when the discharge is too profuse. Such attentions are of very great importance, as it not unfrequently happens, that some of the most troublesome symptoms after delivery, proceed from the irritation excited by piles, which have been much pressed upon during labour.

Palpitation of the Heart. When this affection occurs during pregnancy, it is generally the effect of disordered stomach. It is to be relieved by an emetic, when no circumstance forbids this; by laxatives, by lowering the diet, and avoiding every article of food that is likely to cause flatulence or to overload the stomach. Hysterical symptoms occur chiefly about the period of quickening; they are alarming to those who do not know their nature, but they do not last long. The best treatment is to strengthen the body by diet, air, exercise, and attention to the state of the bowels; and to regulate the mind, and keep away those sudden impressions that may agitate or alarm it. When the fit is on, it is to be shortened by camphor, or valerian, or assafetida; but opium in all its forms is to be avoided.

Cough and Breathlessness, occurring at the latter periods of pregnancy, without fever or inflammation, are to be ascribed to the bulk of the enlarged womb and its contents, pressing on the diaphragm; thus diminishing the space in which the lungs move, and irritating them in the exercise of their functions. A half-sitting posture gives some relief; but nothing will remove it but delivery; although, when it is particularly troublesome, small bleedings may give some mitigation. Blisters are not to be employed.

Pains of the Side, Belly, Back, and Loins, are very frequent complaints of pregnant women. In some cases, they may arise from distension and flatulence of the bowels; such are to be treated by giving rhubarb, castor oil, and other mild laxatives. Or they may arise from the stretching of the muscles, when they are to be treated with anodyne balsams, by a bandage which gives some support to the parts, and by changing the posture of the body frequently in the course of a day. When they are more severe, small bleedings may be necessary.

The *Bladder is sometimes in an irritable state;* in which case, the patient should use mucilaginous drinks and gruels, and be attentive to evacuate it frequently. Towards the end of pregnancy, there is sometimes an inability to retain the water, which is forced away by any exertion, especially by coughing. It is thought rather a good sign, of the head of the child being well down; and therefore, though inconvenient, it need be no cause of alarm.

Retention of Urine is a symptom that should never be neglected at any period of pregnancy, especially at the latter part of it; as it might be productive of very bad consequences, were labour to come on while the bladder is full.

Jaundice sometimes happens in preg-

nancy, and in general there is no cure for it but delivery; the uneasy symptoms are to be palliated by attending to the bowels, giving infusions of chamomile to assist digestion, and aloes to stimulate the intestines. If the yellow colour of the skin is very deep, with violent pain in the side, and great sickness and vomiting, we judge the complaint to be owing to the formation of gall-stones, by some of which the entrance of the bile into the bowels is prevented. Relief is to be attempted by blood-letting, by fomentations to the side, by opiates; and by laxatives to prevent the constipation arising both from the disease and from the opiate.

Swelling of the Legs, and Enlargement of the Veins of the lower extremities, are very frequent accompaniments of pregnancy. They are owing to the enlarged uterus pressing on the great blood-vessels; and but little can be done for the relief of these symptoms, which, without any measures of art directed to them, go off spontaneously soon after delivery. But when the swelling rises above the knee, or appears on the upper parts of the body, and does not disappear after some hours rest in the horizontal posture, it seems to indicate a too great fulness and inflammatory tendency in the system, and requires large bleedings, and repeated purgatives. If the swellings arise from a debilitated state of the constitution, and a dropsical habit, the strength of the patient is to be supported by diet and tonics, while we give what relief we can, by medicines that increase the flow of urine.

Toothach. Some women during pregnancy are much troubled with toothach. It is to be palliated by anodyne applications externally, by small blisters behind the ears, and by fomentations; but very rarely by drawing any of the teeth; indeed it sometimes has happened, that abortion has been produced by drawing a tooth; and surgeons and dentists are not fond of performing this operation during pregnancy.

Cramp is a common occurrence towards the end of pregnancy. It is relieved by change of posture, and by rubbing with anodyne balsam; but delivery alone completes the cure.

Headach. This is never to be neglected in pregnant women, especially towards the later periods. If it proceeds from slight causes, as from disordered stomach, it will be the more easily removed; but if it proceeds from previous mental agitation, or from peculiarity of constitution determining the flow of blood to the head, it may occasion apoplexy or convulsions of the most alarming nature.

Convulsions. When a woman complains of violent excruciating pain in the head, if she has swelling and redness of the face when in the erect posture, or cramps in the stomach with oppressive sickness, the approach of a convulsion is to be suspected. When it does come on, there is violent agitation of the body and limbs, the face is flushed or bloated, the tongue is moved frequently backwards and forwards with a hissing noise, and there is a little bloody froth about the mouth. The duration of the fit varies from a minute or two to half an hour. The woman is quite insensible while the fit lasts, and when sensibility returns, she has no remembrance of what has happened. Sometimes, long after the fit, there is loud breathing and continued insensibility, from which the unhappy sufferer is roused by another convulsion. Sometimes the fits bring on labour pains.

Convulsions of the above alarming description are owing to circumstances both of mind and body, connected with the state of pregnancy. The greater quantity of blood then formed in the body, and the increased susceptibility of the nervous system, may be stated as the predisposing causes. In this state, many things that would have little effect at other times, give rise to convulsions; such are irritation of the stomach or bowels, of the urinary organs; fatigue, sudden agitation of mind. It is very frequently observed, that females who are very anxious about their

situation, are those who are seized with convulsions.

When the threatenings of a fit have shown themselves, it is to be prevented by large bleedings; and if the fit has actually come on, the quantity of blood necessary to be taken, exceeds that which is required in the cure of any other disease. The head is to be shaved, and cold applied in the most effectual way, as by iced cloths, or vinegar and water, or muriate of ammonia dissolved in water. The feet are to be bathed in tepid or in warm water; and if the delivery has begun, it must be assisted by proper means, and accomplished as speedily as possible.

Pregnant women often experience a degree of *anxiety and despondency* approaching to disease; more especially when they have been in the way of hearing untoward histories of other women in that state, or when there is much sickness in the place where they reside. Much depends on their natural temper and character, and on the prudent conduct of their friends, either by diverting their over-anxious thoughts from their own situation, or showing them that their fears are groundless.

We may lay it down as a general maxim, with regard to the great variety of ailments which occur to women in the pregnant state, that they are all to be listened to with patience and attention; that they are never to be ridiculed as affected or capricious; that though we are not to have recourse to violent medical or surgical treatment on every trivial complaint, we are yet to examine carefully whether any mild and safe remedy can be applied, and to encourage the patient by the assurance, that though art can in many cases do but little, these ailments have no tendency to make the delivery more difficult; and that they may confidently look forward to that event, as likely to put a period to all their annoyances.

PROGNOSIS. The anticipations which we form by symptoms, of the progress and event of a disease. There are various particulars in the structure and functions of the animal economy, which enable us to judge of the issue of a disease. Each disease is to be judged by its own symptoms, and every individual case is always to be decided on its own merits. We may, speaking generally, say that a fever is dangerous; or a pleurisy, or a dropsy is so; but this will give little useful information in any particular case. Our judgments are to be formed by comparing the functions as performed in the disease, with the manner in which they should be done in health. The circulation, as indicated by the strength, the frequency, and the regularity of the pulse, and by the complexion of the face and the colour of the surface, gives important ground for our prognosis. Respiration, also, as to its ease or difficulty, its force and rapidity; the state of the stomach as affected with sickness or not, with hunger or with loathing; the tongue, the sight, and other senses, delirium, sleep, muscular strength or weakness; the appearance of the urine, and other excretions, and a great variety of symptoms, alone or in combination, influence the judgment of the practitioner concerning the event of a disease. Much reputation and confidence may be gained by a correct and faithful prognosis; and every physician should exert himself to be able to give his judgment decidedly and candidly, when asked, whether the event is to terminate in death or returning health.

PROSTATE GLAND. A gland situated at the neck of the urinary bladder in the male. It is subject to various diseases, especially to enlargement; the consequence of which is a degree of difficulty in expelling the urine, in some cases so great, as to require the introduction of the catheter repeatedly. The enlarged prostate is difficult of cure; and when much pain and irritation are present, they are to be allayed by opiates or other narcotics, as hemlock, &c. which have been known to do good also when introduced by the anus. This gland is liable to in-

flammation from the sudden checking of a gonorrhœa. Every means must be taken to remove this by bleeding, general or local, and by restoring the discharge from the urethra.

PROUD FLESH. The granulations which arise in the progress of a sore healing, sometimes project much beyond the level of the surrounding parts, and form a red excrescence very irritable, easily made to bleed, and sometimes growing fast in spite of all that can be done to prevent it. Caustics of various kinds, as lunar caustic, or the blue vitriol, are to be applied, or red precipitate of mercury; and occasionally, pressure by straps of adhesive plaster or other bandages, is found useful.

PROXIMATE CAUSE is a medical phrase for that morbid state of the body, or any part of it, which gives rise to the visible phenomena of disease. Thus in inflammation, we wish to know what action of the blood-vessels or of the nerves occasions the heat, swelling, redness and pain; or in fever, what organ or function is in fault; in short, the proximate cause in the body is the disease itself. This is most commonly of difficult investigation, and too often eludes our inquiry altogether.

PRUNES. The dried fruit of the *Prunus domestica*, or plum. When stewed, they are of a laxative quality; and when taken pretty copiously, often supersede the necessity of having recourse to purgative drugs.

PRURIGO. The name for a troublesome itching of the skin, which is of various species, and arises from various causes. In some, it occurs in the spring and early part of summer, probably from the increasing temperature. Diligent washing with tepid water, and the use of sulphur internally, will, after a time, relieve this. There is another species of prurigo, which, in some constitutions, proceeds from the use of certain articles of diet, as some kinds of fish, vinegar, and cider. Where it arises from disordered stomach, it is to be treated by laxatives and a change of diet; when it occurs in debilitated habits, a course of tonics must be employed; and the use of tepid bathing externally is necessary; or still better, the sulphureous waters externally. The most troublesome kind of prurigo, is that which occurs in old people; it is to be relieved by the warm bath, and by Harrowgate water internally and externally. A warm sea-water bath has been found of service.

PRUSSIC ACID. A colourless transparent liquid, but occasionally having a yellow tinge; it has a peculiar odour, which, when diffused through the air, resembles that of bitter almonds; its taste is bitterish and peculiar, but its properties are soon lost by exposure to air and light. Modern chemists have ascertained, that prussic acid contains a gaseous and highly inflammable compound of carbon and azot, which they term *cyanogen*, and which is rendered acid by combination with hydrogen. Its composition is indicated by its name of *hydrocyanic acid*. It obtained the name of prussic acid, from its being one of the constituent parts of the dye called Prussian blue. Prussic acid is one of the most virulent and rapid poisons known. According to the French physiologist Magendie, if a single drop of the concentrated acid be put into the throat of a dog, the animal makes two or three deep hurried respirations, and instantly drops down dead; it causes death almost as instantaneously when dropped under the eyelid; and when it is injected into the jugular vein, the animal drops down dead at the very instant, as if struck with a cannon-ball, or with lightning. The effects of the diluted acid are the same when the dose is large, but somewhat different when smaller doses are given. Nausea, salivation, hurried pulse, giddiness and convulsions ensue. "It is probable that very large doses occasion death in a few seconds, and at all events, a few minutes will suffice to extinguish life when the dose is considerable; but if the individual survive thirty or forty minutes, he will very generally recover

Prussic acid acts strongly in all its chronical combinations, as for instance, prussiate of potash or of ammonia; but the triple prussiates are not poisonous.

The proper treatment of a case of poisoning with prussic acid consists in the use of the cold affusion, and the inhalation of diluted ammonia or chlorine. Venesection is also probably indicated by the signs of congestion in the head. It is right to remember, that on account of the dreadful rapidity of this variety of poisoning, it will rarely be in the physician's power to resort to any treatment soon enough for success; and farther, that his chance of success must generally be feeble even when the case is taken in time, because when hydrocyanic acid is swallowed by man, the dose is generally so large as not to be counteracted by any remedies." (Dr. Christison.)

This peculiar acid exists in a great variety of native combinations in the vegetable kingdom, as in bitter almonds, cherry-laurel, the kernels of the peach-tree, and of various fruits, especially in the thin skin which covers the kernel; and the distilled water and essential oils of some of them are nearly as rapidly destructive as the acid itself.

Prussic acid has been introduced into medicine in pulmonary and other inflammations, and in heartburn and other stomach complaints, and as a lotion in some diseases of the skin; but it has not been found very useful, and is not much employed. The dose is from two to four or six drops of the diluted acid, in any convenient vehicle.

PSOAS ABSCESS. *See* Lumbar Abscess.

PSORA. *See* Itch.

PTISAN. A diluent drink which makes a great figure in the dietetic precepts of the ancients. *Ptisan* strictly signifies an extract, and was originally applied to barley which was boiled till it began to swell, then was dried in the sun, bruised, cleared of the husks, and again bruised. A decoction was made of this prepared barley, and used as a drink in feverish disorders. Other drinks of a similar kind were called ptisans, though not made of barley; and Horace tells his rich miser that he requires a ptisan of rice, *ptisanarium oryzæ*. The term is not much used by medical men in this country. In France it seems to be a general name for diluent drinks.

PUBERTY. The age of puberty in both sexes, is about fourteen or fifteen.

PUDDINGS. Certain articles of diet prepared by reducing some of the farinacea to a solid form. The most digestible pudding is that made with boiled bread; flour or batter pudding is not so easily digested; rice forms a very good pudding, when there are not too many eggs put into it. Suet pudding is very hurtful to weak stomachs. The indigestibility, indeed, of these forms of diet, is to be estimated by the quantity of oily and fatty matters that enter into their composition.

PUERPERAL *or* Childbed Fever. So many diseases accompanied with feverish excitement, occur in the puerperal state, that the appellation at the head of this article might be supposed to apply to a great variety of ailments; but medical men wish it to be restricted to a disease of peculiar symptoms, and of great malignity; though they are not all agreed either upon the exact train of symptoms which occur, or upon the method of treatment most successfully pursued in them. In treating of a disease which has been the occasion of much controversy among physicians, it would be quite inexpedient to bring disputed points before the general reader; but we may say a little to quiet the minds, and inform the judgments of those, who are likely to consult this work. When a woman, within three or five days after delivery, is seized with shivering, followed by heat of skin, thirst, flushing, headach, &c. she need not be apprehensive that she is seized with *puerperal fever;* it may be the milk-fever, which soon abates when the bowels are opened, and when the child sucks freely; it may be from suppression of the cleans-

ings, which are often restored by warm fomentations and a dose of castor oil; or a little cold or imprudence in fancying herself too well, may have occasioned the unpleasant symptoms, which, although really febrile, do not constitute true puerperal fever. But when a woman has had a comparatively easy labour, when the discharge is moderate, when the milk has begun to flow, when, between forty-eight hours and six days after delivery, she is seized towards evening with cold and shivering, when she afterwards becomes hot and restless, when she loses all care about her child, lately so interesting to her; when she has a fixed pain over the eye-brows, or a feeling of tension, as if a cord were forcibly bound round the forehead, when the pulse is small and quick, when the belly is tender—then it is time for the friends of the patient to take the alarm, and to get prompt assistance, taking care not to agitate or distress the patient herself, by showing their anxiety or apprehensions.

Symptoms. Puerperal fever is distinguished by frequency of pulse, oppression, sickness, and headach, by want of sleep, sometimes with delirium; by pain in the belly, slight at first, and afterwards increasing, so that the patient cannot bear the weight of the bedclothes. The eyes are without animation, the countenance is pale and ghastly, and the whole appearance indicates great oppression and anxiety. The patient commonly lies on her back, and if laid on her side, soon returns to her former posture. Vomiting sometimes occurs very early; and as the disease advances, it is so severe that nothing will remain on the stomach; and there is a discharge of dark coloured fetid matter, resembling coffee-grounds. The heat of skin is not very great, the pulse soon becomes feeble, the tongue is brown, but the patient does not complain much of thirst. At first, the bowels are bound, but there is soon a discharge of fetid frothy stools. In many cases, neither the milk nor the cleansings are suppressed. The patient inquires but little after her child. Soon the strength sinks, the natural evacuations are made involuntarily, the mouth and tongue become foul, delirium takes place, and the patient dies, generally about the fifth day of the disease, though some linger on a little longer. The fever generally attacks on the second or third day after delivery.

Causes. No particular circumstance in the labour seems to be instrumental in producing this disease. It comes on after the most natural and easy delivery; it also may come on after a flooding, which has weakened the patient so much, that we might suppose inflammation or fever impossible. The disease in many cases is brought on by exposure to cold, premature exertion, irregularities in diet, and agitation of mind.

Puerperal fever occasionally prevails as an epidemic in particular districts; and it has occurred in hospitals, even when well regulated, at a time when it has not been prevalent in the city where the hospital was situated. It has also, in some districts, appeared to follow the practice of individual midwives or accoucheurs; all those who have been delivered by certain practitioners for some weeks, having been seized with the disease; while other practitioners, in the same town, of equally extensive practice, have not had any case under their care. Some physicians think the progress of the complaint is so decidedly that of typhus with local inflammation, that they have not a doubt about considering it as a typhoid peritoneal inflammation; for the peritoneum has often been found inflamed and covered with an albuminous effusion, which has induced the French physicians to call it *un depôt laiteux*, a deposition of milk, though it has no connexion with that secretion.

Diagnosis. We have partly, in our introductory remarks, anticipated the mention of some of the particulars which distinguish the true puerperal fever from other febrile affections of childbed. It is distinguished from inflammation of the peritoneum, by there being more despon

dency, debility, and headach; while the thirst, heat of the skin, and flushing of the face are less. In the peritoneal inflammation, the pain increases rapidly when it has once begun, and is very much increased by pressure; the attending fever is more inflammatory than typhoid. In inflammation of the womb, there is much pain when that region is pressed; also pain in the back, shooting to the groins; difficulty of voiding urine, and suppression of the cleansings. In puerperal fever, the pain and swelling are most remarkable over the pit of the stomach, and when pressure is made there, a doughy feel is communicated to the hand of the examiner.

Prognosis. In hospitals, the disease, with hardly an exception, is fatal. The earlier the attack, the more tense the belly, and the less complaining the patient makes, the danger is the greater. If the pulse continues at its first frequency, or if it increases, the disease will likely prove mortal. If the fomentation of the belly does good, if the pain on pressure is less, if there be an equal, warm, and copious perspiration, our hopes are somewhat better.

Treatment. This is a subject of great difficulty; the acute pain of the belly would strongly urge us to employ blood-letting, but several practitioners of great experience have declared this practice to be very pernicious. In the early part of the disease, when the strength is not yet greatly impaired, blood-letting should be employed; but the cases in which large bleedings have been successful, were probably inflammatory cases, and not the true puerperal fever. When the disease has lasted two days, and symptoms of debility have come on, then in all probability bleeding would only hasten on the fatal event. An emetic of ipecacuan, on the very first appearance of the disease, has seemed in some instances to check its progress, and in others to render it milder; but on the second, or any subsequent day, emetics are attended with no benefit whatever. From the earliest period of the disease, we are to pay attention to the bowels, and procure regular and free evacuation of them, even by medicines of considerable activity; taking care to prevent and check any exhausting diarrhœa. The laxatives we employ are the compound powder of jalap, calomel in frequently repeated and pretty large doses, from three to six grains, three times a-day, working it off by infusion of senna, or by neutral salts. A clyster should be early thrown up, and the bowels fomented. We also expect good from an equable and gentle perspiration, which in this disease we may attempt to bring out by Dover's Powder, by camphor, or warm sudorifics. The strength is to be supported by light and easily digested food, by animal jellies, by sago with a little wine, and by chicken-broth with rice. A little wine and water may be allowed, and as the debility seems to gain ground, the stimulus must be increased both in quality and quantity; and, if the stomach will retain it, even bark and wine, or the sulphate of quinine, must be administered very freely. Such seems to be the safest practice, and in some cases it is successful; but puerperal fever is always to be regarded as a very dangerous disease. When the woman is to recover, the unfavourable symptoms abate but slowly, and the weakness continues long. In this convalescent state, the bark and wine must be given in large quantities, and the diet must be as nourishing as the stomach and digestive powers of the patient will admit.

When the disease has occurred in hospitals, the lying-in wards should be shut up for some time, after being completely fumigated and white-washed.

PULSE. The pulse consists in the alternate contraction and dilatation of the heart and arteries, by which contraction, aided by the force of the heart, the blood is propelled through every part of the body. As the beats of the arteries correspond with the motions of the heart, we judge, by the pulsation of the arteries, of the state of the circulation, and from

this we derive many important indications in disease. The frequency of the pulse in health is about 72 beats in a minute, or it ranges between 60 and 80; but in some it is slower, without any derangement of the health. The pulse is quicker in women than in men; it is quicker in the sanguine than in the melancholic temperament; in youth, than in age. The pulse of an infant in the first days of its life, is from 130 to 140. During the first year, it is from 108 to 120. From the state of the pulse, taken in conjunction with other symptoms, we judge of the existence of inflammatory complaints, of the state of debility, and of the effects of certain medicines. In feverish complaints, it rises to 100, 120, 168, or even to be uncountable. In certain diseases, as water in the chest, it intermits and becomes irregular, and the same effect is produced by the use of the foxglove. In some persons the pulse is naturally intermitting, in others it intermits from disorders of the stomach and bowels, and also from emotions of the mind. The artery generally chosen to ascertain the state of the circulation, is the radial artery, where it is superficially seated in the wrist; but when this is inconvenient, it may be done in the temporal artery, or at the corner of the lower jaw. In feeling the pulse, some attentions are requisite. In many the circulation is quickened by any mental agitation; and, therefore, the entrance of the physician, or his questions and remarks on the patient's case, may quicken the pulse, which should be felt, therefore, both at the commencement and termination of the visit.

PUNCTURING THE BELLY is frequently practised as a means of letting off dropsical waters from that cavity, or from the ovarium. It is commonly called *Tapping*, from a very obvious allusion. When we have determined on this operation, the best place for doing it is in the middle of a line reaching from the navel to the share-bone. The instruments employed are a trocar and canula. The trocar is a perforator or stilette with a triangular point, and the canula or tube is so adapted to the instrument, that when the puncture is made, they both enter the wound together with perfect ease; after which, the stilette being withdrawn, the canula remains in the wound, and gives a ready passage for the fluid outward. The surgeon should always have a probe ready, to clear the canula of any viscid or fatty matter that may obstruct it. When a great quantity of water is suddenly let off, the removal of the pressure sometimes produces swooning, convulsions, or even sudden death. We are to be on our guard against this, and to have cordials ready; and supply the usual pressure by passing a sheet round the belly, which is to be gradually tightened by two assistants, in proportion as the water is evacuated. Tapping is not often the means of a permanent cure of dropsical complaints, but it gives great temporary relief. Many patients, especially females, have it done repeatedly; some, twenty or thirty times.

PUNCTURING THE CHEST. The method of this is fully detailed at p. 232, 233. *See* EMPHYSEMA *and* EMPYEMA.

PUPIL OF THE EYE. The aperture seen through the transparent part on the front of the eye, by which the rays of light are let into the retina. It is sometimes irregular in its shape; sometimes from disease it is obliterated; and oculists have had the address to make an artificial pupil. It is through, or near the pupil, that instruments are passed for the extraction or depression of cataract.

PURGATIVE MEDICINES are those substances which increase or quicken the evacuation from the intestines. As distinguished from *laxatives* in their effects, they may be said to produce a considerable influx of fluids from the exhalant vessels which open into the intestinal canal, and hence to extend their action to the system in general. When very violent in their action, they are called *drastic* purgatives. The effects of a purgative depend either on their stimulating the muscular fibres of the intestines to a

quicker motion, by which the contents of the bowels are more speedily and completely discharged; or on their stimulating the exhalant vessels and the mouths of the mucous glands, which open into the bowels, by which there is an increased discharge both of serous and mucous fluids; or purgatives may so stimulate the neighbouring viscera, as to occasion a more copious discharge of the bile and pancreatic liquor. Different purgatives have different powers of producing these several effects. Sulphur, magnesia, and manna, evacuate the bowels without any great increase of serous discharge; while others, as the neutral salts, and some vegetable purgatives, as gamboge and elaterium, produce large watery evacuations, and are thence denominated *hydragogues*. The mercurial purgatives, as calomel, seem to act chiefly by promoting an increased flow of the bile, and hence are called *cholagogues*.

The use of purgative medicines is of great importance in the preservation of health, and the cure of disease. They can be so managed and selected, as either simply to promote the discharge of the feculent matter, or to cool the system by abstracting watery fluid, and withdrawing the action from the upper parts of the body; or to promote the flow of dropsical water by stimulating the absorbents and exhalants, which open in such prodigious numbers on the inner surface of the intestines.

The neutral salts furnish many useful purgative medicines; as the sulphate of soda, the sulphate of magnesia, the phosphate of soda, the tartrate of soda; these are commonly given to purge and to cool the system, and are useful in inflammatory disorders. The usual dose of them is an ounce, dissolved in about four ounces of tepid water: they should be taken in the morning, and not too warm, as in that case they will either be thrown up, or pass off too quickly by the bowels. The purgatives from the vegetable kingdom are very numerous, as aloes, jalap, rhubarb, gamboge, scammony, colocynth, and others; and in addition to these, we have calomel, and perhaps a few more, from the mineral kingdom. Castor oil is a mild and safe purgative, more commonly ranked as a laxative; and there is another vegetable oil, the croton, famous for its activity in doses so small as a single drop or two.

Purgatives are combined together with great and manifest utility; not with the result of adding the powers of one to another, but of making the desired effect more complete, certain, and advantageous. Thus five grains of calomel will purge, and twenty grains of jalap will purge separately; but by giving in one dose, five grains of calomel and twenty grains of jalap, we do not produce a double evacuation, but the one modifies the other, and produces the effect intended with certainty and expedition. It is unnecessary in this general article, to speak of the different kinds of purgatives, as we have detailed under each of them, their properties, and the reasons of preferring any of them in particular cases. We may say here, that it is not a good habit to take frequent purgatives; they relax the intestines and debilitate the digestive system, as well as the whole body; but in some constitutions, the bowels are so torpid, that it is absolutely necessary for the preservation of health, to take some medicine or other pretty constantly; directed, not so as to produce copious thin stools, but gently to stimulate the intestines, and excite them to evacuate only the proper fæces.

PURPURA. In Dr. Willan's arrangement of cutaneous diseases, *Purpura* means an efflorescence consisting of small, distinct, purple specks and patches, attended with general debility, but not always with fever. These specks and patches are occasioned by an extravasation of blood, under the cuticle, from the extremities of the cutaneous vessels. The petechiæ, or spots like flea-bites, which occur in bad typhoid fevers, and the appearances of stripes in similar cases; and the livid marks common in sea-scurvy, are instances of purpura.

There is one species of purpura, of considerable severity and danger, to which no English or popular name is given: Medical writers call it *Purpura Hæmorrhagica*, from the profuse discharges of blood which sometimes occur, and endanger, if not destroy the life of the patient. We shall give the description of the disease from Dr. Bateman, and add any remarks that may appear useful.

Symptoms. The petechiæ are often of a large size, and are interspersed with livid stripes and patches resembling the marks left by the strokes of a whip, or by violent bruises. They commonly appear first on the legs, and at uncertain periods afterwards, on the thighs, arms, and trunk of the body; the hands being more rarely spotted with them, and the face generally free. They are usually of a bright red colour when they first appear, but soon become purple or livid. In the spots which appear on the tongue, gums, palate, and inside of the cheeks and lips, where the cuticle is extremely thin, it breaks from the slightest force, and the effused blood is discharged. The gentlest pressure on the skin, even such as is applied in feeling the pulse, will often produce a purple blotch, like that which is left after a severe bruise.

The same state of the habit which gives rise to the effusions under the cuticle, produces likewise copious discharges of blood, especially from the internal parts, which are defended by more delicate coverings. These hæmorrhagies are often very profuse, and not easily restrained; and therefore sometimes prove suddenly fatal.

This singular disease is often preceded for some weeks by great lassitude, faintness, and pains in the limbs, which render the patient incapable of any exertion; but, not unfrequently, it appears suddenly in the midst of apparent good health. It is always accompanied with extreme debility and depression of spirits: the pulse is commonly feeble, and sometimes quickened; and heat, flushing, perspiration, and other symptoms of slight febrile irritation, recurring like the paroxysms of hectic, occasionally attend.

The disease is extremely uncertain in its duration: in some instances it has terminated in a few days; while in others it has continued not only for many months, but even for years. When the disease terminates fatally, it is commonly from the copious discharge of blood, either suddenly effused from some important organ, or more slowly from several parts at the same time.

Causes. The causes of this disease are by no means clearly ascertained, nor its pathology well understood. It occurs at every period of life, and in both sexes. The rapidity of the attack, the acuteness of the pains in the internal cavities, the actual inflammatory symptoms that sometimes supervene, the occasional removal of the disease by spontaneous hæmorrhage, the frequent relief derived from artificial discharges of blood, and from purging, all tend to excite a suspicion that some local visceral congestion or obstruction is the cause of the symptoms in different instances.

Treatment. When purpura is accompanied with a white and loaded tongue, a quick and somewhat sharp, though small pulse, occasional chills and heats, and other symptoms of feverishness, however moderate; and if at the same time there are fixed internal pains, a dry cough, and an irregular state of the bowels, blood-letting to a considerable extent, but cautiously employed, and free and repeated evacuations of the bowels, by medicines containing some portion of the submuriate of mercury, will be found most beneficial. The continuance or repetition of these evacuants, must, of course, be regulated by their effects on the symptoms of the complaint, or on the general constitution; and by the appearance of the excretions from the intestines, and especially of the urine; to which last excretion, Dr. Combe of Leith has very properly directed our attention. In a case, which he treated successfully by blood letting, he found the urine contained

abundance of albumen, as happens in inflammatory dropsies. When the urgency of the hæmorrhagic tendency has been diminished by these means, the constitution rallies, though not rapidly, with the assistance of the mineral acids, and the decoction of bark, or cascarilla, or some preparation of iron, together with moderate exercise, and nutritious diet.

The similarity of the spots and patches to those which occur in sea-scurvy, and the discharges of blood from the mouth in both diseases, have led some to confound them together, and to consider purpura hæmorrhagica as a disease of debility, to be treated by the mineral acids, tonics, bark, and wine; but there seem to be "two species of purpura hæmorrhagica, the one accompanied by fever, and a disease of increased action; the other a chronic affection, and not attended by fever, inflammatory blood, or serous urine. Our practice must be regulated by the individual cases, and not a little, perhaps, by the state of the urinary secretion." (*Edin. Med. Journal, Jan.* 1821.)

PURULENT OPHTHALMY *of Infants.* *See* EYE, *and its diseases.*

PUS. The matter which forms in a part when it has been seized with inflammation, and when the inflammation has not gone off spontaneously, or been subdued by proper remedies. In this case, suppuration, or the formation of matter, seems to be a necessary step in the progress to a cure; and the formation of it is to be promoted by the application of warm fomentations or poultices, when the inflamed part is within our reach. Good or healthy pus is of a yellowish colour, of the consistence of cream, smooth and equal to the feel, and without any heavy or fetid smell. When it is dark-coloured, it is owing to its being mixed with blood; and in scrofulous abscesses, it is unequal, curdy, and often of a bad smell. When pus is forming, there often occur shiverings of the whole body. Under CONSUMPTION, we have acknowledged the difficulty of distinguishing between pus and mucus. *See* ABSCESS *and* INFLAMMATION.

PUSTULE. An elevation of the cuticle, with an inflamed base, containing *pus.* There are different kinds of pustules, some of a large size, raised on a hard, circular base, of a vivid red colour, and succeeded by a thick, hard, dark-coloured scab; others are small, often irregularly circumscribed, producing but a slight elevation of the cuticle, and terminating in a laminated scab. Sometimes several of the elevations of the skin arise upon a common inflamed surface; but most frequently the inflammation of the base of each is distinct and circumscribed. Dr. Willan reckons five genera of pustular diseases, having in their character nothing in common, except the appearance of pustules in some stage of their progress; some are contagious, and others not; some are acute, and others chronic. The tetter, the scalled head, and the itch are pustular diseases; but the most conspicuous and formidable of them all is small-pox.

PUTREFACTION. A process by which animal and vegetable substances lose their contexture, change their composition, and become useless or noxious. Certain diseases are considered as having a tendency to putrefaction, as some fevers, sore throats, mortification, &c. In fevers, the discharges are very much unlike the natural ones, have a very fetid smell, and seem also to have the power of exciting diseases of the same kind as those under which the patient labours. When those putrefactive symptoms occur, they are to be combated by acids, refrigerants, and such substances as are known to be opposed to putrefaction; small beer, porter, cider, and malt liquors are to be given. The carbonic acid, as extricated from carbonate of soda, or obtained from barm, is to be applied; all evacuations are to be quickly removed from the chambers of the sick, and the utmost attention paid to ventilation and cleanliness.

To retard the putrefaction of animal matter intended for provisions, is sometimes of great consequence.

"Various means are resorted to for

retarding animal putrefaction; a reduction of temperature is by far the most efficacious. Meat, when put into snow or ice, may be kept almost any time, and hence the common practice of sending fish to a distance packed in it. In cold countries also, a store of provisions is laid up, surrounded by snow; in which state it remains till required for use. Depriving animal matter of its moisture is another mode of preventing putrefaction. We find, accordingly, that dried fish may be kept for a long time. In some countries, it is also the custom to cut flesh into thin slices, and dry it gradually, by which it may be preserved till provisions can be otherwise procured.

"There are many substances that retard putrefaction, some of which, it is supposed, act merely by absorbing the moisture of the animal matter. The most powerful of these is common salt, which is used in great quantity for preserving butcher meat, fish, butter, and many other articles. Of late, pyroligneous acid has been highly recommended for this purpose. It is even said that it will render sweet, animal matter that has become putrid. In using it, the meat is merely dipped in, and almost instantly removed. Should it have become putrid, it may be left in for a few minutes.

"Other means have also been practised for preventing putrefaction. The complete exclusion of air, it is well known, retards it; hence the custom of rubbing eggs with salt butter, and of keeping them in lime-water. Flesh is also sometimes preserved in this way; for which purpose it is put into a cask, afterwards made as air-tight as possible. It has been found also, that by boiling meat for some time, and then putting it into barrels, it may be kept long without putrefying; and hence a practice often resorted to in long voyages." (FYFE's *Elements of Chemistry.)*

PUTRID FEVER. *See* TYPHUS.

PUTRID SORE THROAT. *See* SCARLET FEVER.

PYLORUS. The extremity of the stomach, communicating with the intestines; surrounded with a ring of muscular fibres of great sensibility, which for some time refuse egress to such matters as are not fitted to undergo the next changes in the function of digestion. Thus, ill-masticated food, coins, stones of fruit, and other bodies are not at once suffered to pass from the stomach into the next portion of the gut. The pylorus is subject to alteration of structure ending in cancer, and giving rise to very painful and distressing symptoms. *See* STOMACH COMPLAINTS.

PYRMONT WATER. The water of a spring at Pyrmont, in Westphalia. It is of an agreeable, strongly acid taste, and emits a large portion of gas. It is useful in cases of debility, and in disorders of the alimentary canal, in diarrhœa, and in complaints connected with difficult or obstructed menstruation. It is generally drank in the morning, in the quantity of two English pints. It has some effect in increasing the urine, but acts very slightly on the bowels, unless the quantity taken be pretty copious.

PYROLIGNEOUS ACID. A strong vinegar procured by the distillation of wood in the process of preparing charcoal for the manufacture of gunpowder.

Q

QUA

QUACK. The appellation of Quack, says Dr. Parr, arose from *quacksalber*, the German name for quicksilver; since on the first appearance of syphilis, the irregular practitioners only, employed this reputedly dangerous medicine. At present, the term *Quack* is confined to those who sell a pretended nostrum, the preparation of which is kept secret; but may be applied to every practitioner who, by pompous pretences, mean insinuations, and indirect promises, endeavours to obtain that confidence, which neither success nor experience entitles him to.

QUACK MEDICINES. The visionary projects in which the alchymists, for so many centuries, spent their time and fortune, were the art of transmuting the baser metals into gold, and the discovery of a medicine which was to secure health and immortality upon earth. The first of these is now given up as hopeless; but if we may credit the lofty pretensions of our medicine venders, the latter is obtained, if not by one, at least by the combined or successive use of several, of their nostrums. There is no disease of dreaded name for which these oracles cannot furnish a cure. Asthma and consumption are disarmed of their terrors, gout is now but a harmless bugbear; and if any suffer or die of cancer, it must be the fault of their own obstinacy or incredulity. The diseases of childhood need give little concern; there are anodynes which allay the pain of teething; there are worm lozenges which no reptile can resist, and there are washes which infallibly cure and beautify the skin. Laborious investigation of disease is unnecessary; the doctor does not need to see his patient, who has only to send a letter describing his case, with the usual fee; and the remedy will come to

QUA

the remotest corner of the kingdom Even this trouble may often be dispensed with; a patient has merely to consider for himself, whether he is bilious or nervous, whether his skin or his bowels are in fault; whether he needs stimulants or evacuants; and pills, and cordials, and balsams of unerring efficacy, are to be found in every town, ready to his hand. Of the truth of these statements there cannot be a doubt, as numberless cures are attested by those who have tried them; and whose benevolence prompts them to publish, for the benefit of mankind, the advantage they have experienced in themselves or their families.

The credulity and confidence of those who give their testimony to the benefits which they think they have seen to arise from patent medicines, is equalled only by the large promises of those who sell them. These attestations, though honestly given, are given in ignorance. A person is afflicted with a certain combination of symptoms, to which medical men, or the common people, assign a distinctive name, as fever, dropsy, scurvy; he recovers his health after the use of some particular medicine, and is perfectly convinced that that medicine cured him. He rejoices in his success, and confidently recommends the same drug to his friend, who is said to labour under the same disease. But there is here a double fallacy. The first patient cannot be sure that he had the disease which he supposes, and he cannot be certain that the remedy cured him. As it is doubtful whether the second patient is afflicted in a similar way, the same medicine may not be applicable to him.

When we consider the endless variety of the human constitution, its deli...

and almost evanescent changes in health and disease, it must be obvious, that a remedy which will suit one person may be very unfit for another, and that a medicine which to-day is salutary, may be attended with disastrous results if repeated to-morrow. In popular language, and even in the language of physicians, it may be said with truth, that ten persons have the same disease, as small pox, fever, or a cold; but it will require correct and accurate observation, to discriminate the differences in the case of each, and to apply the remedies which are proper to them. But by the same patent medicine, and in the same dose, eighty thousand cases are said to be cured in a year; and patients indiscriminately are invited to apply a composition, in a case which they call a disease of some particular name, though a skilful physician would consider a totally opposite remedy as necessary.

There is something in the moral aspect of a secret remedy that ought to put mankind on their guard against it. The possession of health is to all so valuable, and to the poor so necessary; pain and suffering are so dreadful, that it is the duty of every one to communicate every assistance in his power to relieve it. With all the industry and accumulated knowledge of ages, there are too many diseases which baffle all the skill of the profession; and there must be something suspicious about those who, affirming themselves to be in possession of a remedy for cancer or consumption, conceal the knowledge of it in their own bosoms.

There are some useful and esteemed medicines, which at first appeared in the disreputable form of secret remedies. Such were Dover's powder, James's powder, and most of the internal and external remedies which bear the name of Ward. This man was originally a footman, and during his attendance upon his master on the Continent, obtained from the monks those receipts which afterwards became his nostrums. Some patent medicines are harmless and insignificant, and commonly their only effect is to amuse the patient with delusive hopes, and to trifle away the time during which the constitution could bear the employment of active remedies. In other cases, by the alacrity and hope which they inspire, they may impart a salutary energy to the mind; and hypochondriacs may be brought to use rational methods of cure, while they expect every thing from their boasted specific. Some patent medicines are merely those which every physician prescribes, and every druggist sells; but which quacks disguise, and multiply the price of, manifold. Drugs of the same composition as Anderson's pills, and Barclay's antibilious pills, and James's analeptic pills, could all be purchased at a much cheaper rate. But there are other kinds of quack medicines of a more dangerous tendency, and against which the ignorant and credulous should be put on their guard. Such are all those which profess to be an infallible cure for cancer, which promise to cure syphilitic complaints without the use of mercury, and those which cure colds and consumptions. Arsenic is the basis of all the anti-cancerous remedies; and under ARSENIC and CANCER we have stated the danger of using this mineral, which, even when applied externally, is often fatal. The anti-syphilitic drops, gutta salutaris, solar tincture, Spilsbury's drops, and a host more of such compositions, contain, as their active ingredient, the corrosive sublimate of mercury; which, from its being easily disguised, and of great activity, is very convenient for the purposes of empirics, but proportionally dangerous for the ignorant to employ. The cures for colds and consumptions are almost all compositions containing opium, the quack's sheet-anchor, as Dr. Paris calls it. There is what is called Balsam of Horehound, said to cure colds, coughs, and disorders of the lungs; which consists of a watery infusion of horehound and liquorice root, with double the proportion of proof spirit or brandy, to which is then added, opium, camphor, benzoin, squills, oil of aniseed, and honey. This enumeration is surely

enough to show the absurdity of the pretensions of this and similar medicines; and it shows the danger run by those who venture to use them, without a knowledge of the tendency to inflammation of the lungs, which accompanies a great proportion of the colds of this country.

Credulity with respect to quack medicines is peculiarly dangerous in the nursery. Parents should rarely prescribe medicines themselves, and should rigorously prohibit the administration of them by servants. No patent medicine, however excellent, should form any part of the nursery store; and the ailments of children, however slight, should, as soon as possible, be put under the care of the medical attendant. Parents should know what is proper to be done on any sudden emergency, as in the case of burns wounds, or contusions; they should understand the most useful measures to be pursued in convulsions, or screaming from pain of the bowels; but they should not suffer many hours to elapse without consulting the family physician or surgeon.

QUARANTINE. The period of *forty days*, during which a ship which has come from countries infected with the plague, is debarred from all intercourse with the people of the country at which she has arrived, for fear of spreading the disease. The experience and investigations of late years seem to have established the fact, that the plague is not so rapidly and certainly contagious as is commonly believed; and that although the enforcement of the quarantine laws is a measure of prudence, and even of necessity, the period might be shorter than forty days. Before a vessel is released from quarantine, cotton and woollen goods, and those made of animal hair, should be ventilated and fumigated; and the same should be done with wearing apparel, books, and papers. It has been remarked that it would be less expensive, and infinitely less vexatious, than waiting the long period commonly prescribed, if all the wearing apparel of the crew were destroyed, in case of the slightest appearance of infection.

QUARTAN AGUE. A species of intermittent fever, in which the paroxysm comes on every fourth day; or in which the interval from the commencement of one attack to that of the next, is seventy-two hours. *See* AGUE.

QUASSIA. *Quassia Simarouba.* A species of wood imported from the West Indies, the infusion of which forms a very useful tonic bitter. The strength of the infusion is two drachms of the rasped wood to a pint of boiling water, infused for four hours, and strained. As it does not, like many vegetable infusions, blacken the preparations of iron, chalybeates may be joined with it very commodiously. The dose of the infusion is from half a pint to one pint in the day. There is also a decoction made by boiling six drachms of the bark in two pounds of water. A wine-glassful may be taken three times a-day.

QUICKSILVER. The fluid metal commonly called Mercury. *See* MERCURY.

QUININE *or* QUINIA, is a vegetable alkaloid body, discovered by modern chemistry in the yellow Peruvian bark, (*Cinchona cordifolia.*) "It is a white powdery substance, sparingly soluble in water, but dissolved by warm alcohol, from which it is not deposited in crystals. Quinia unites with acids, and forms salts, the most important of which is the sulphate. It is soluble in water, and crystalizes. It is now much employed in medicine, being found to answer all the purposes of bark; and as a small dose is necessary, it does not produce the unpleasant effects of the bark powder or infusion. Eight grains are considered equal to an ounce of the powder." (DR. FYFE.)

QUINSY. The English name for inflammatory sore throat, and other affections of that part. *See* THROAT, SORE.

QUOTIDIAN. A species of ague, whose paroxysms return every day, and go through all their three stages. Such agues approach the character of remittent or continued fevers, and are more difficult of cure than tertian agues. *See* AGUE.

R

REG RES

RADISHES, *Raphanus sativus*, are esculent roots, which have a pungent and acrid taste. They are not very nutritive, but they may be useful as a stimulant. With some stomachs they disagree entirely.

RASH. Superficial red patches, variously figured, and diffused irregularly over the body, leaving spaces between of a natural colour, and terminating in a scaling off of the outer skin. The nettle-rash, measles, and scarlet fever, are examples of what are called *rashes*.

RASPBERRY, *Rubus Idæus*. A very pleasant fruit, which, either taken when ripe, or preserved, and its jam diluted in water, forms a grateful beverage in feverish diseases.

REFRIGERANTS. Medicines or applications intended to diminish the morbid heat of the body. Cold water, or other cooling lotions, as vinegar and water, or a solution of sugar of lead, or sal-ammoniac, or cool air, are well entitled to the appellation of refrigerants; but the term is more generally applied to substances taken into the stomach, as the vegetable acids, vinegar, lemon-juice, tartaric acid, cream of tartar, nitrate of potash. Blood-letting and purgatives may also, with reference to their ultimate effects, be accounted refrigerants, though they are rarely called so.

REGIMEN. The mode of managing the various appliances necessary for the human body, with a view to the cure of disease, and the preservation of health. Under regimen, we include the various particulars connected with diet, sleep, exercise, air, excretions, and the management of the passions of the mind. The regimen must vary with the varying constitutions of individuals, and with the particular disease, which it is wished to prevent or cure. To prevent apoplectic attacks, for example, and too great a flow of blood to the head, the regimen must be such as to hinder the over-nourishing of the body, consisting of a large proportion of vegetable food, abstinence from butcher meat, butter, rich sauces, wines, and malt liquors; taking constant and regular exercise on level ground, but without fatigue; breathing, if possible, a pure and free air, sleeping with the head and shoulders raised, and not protracting the time of sleep too long. In scrofulous subjects, the regimen must be different; our object there, is to strengthen the system by moderate but nourishing diet, by a prudent allowance of wine and tonic medicines, by exercise and the pure air of the country. In stomach complaints, the principal part of the cure consists in proper regimen; and under that article we have given a full detail of what is necessary to be attended to. Under that of the ANTIPHLOGISTIC REGIMEN, we have mentioned the numerous observances necessary in fevers and inflammatory complaints.

RESINS. Certain vegetable productions soluble in alcohol, but not in water or proof spirit. Many resins are used in medicine, as guaiac, myrrh, scammony, aloes; and from the circumstance of their insolubility in certain fluids, we are to take care in what vehicle we administer them. Thus, if we prescribe tincture of guaiac, should we direct it to be taken in water, the appearance it would assume when thrown into water, would probably startle our patient; but it must be given in milk or some mucilaginous fluid. Resins are often used in the composition of plasters, and are brought to the proper

consistence by having a quantity of wax or oil melted with them.

RESOLUTION. A term used to signify the cessation of inflammation in any part of the body, without the formation of pus, or any visible alteration of structure. This is the most desirable termination of inflammation; and to effect this, is the purpose of all our bleeding, purging, and antiphlogistic practice in the treatment of internal inflammation, and of our cold and repellent applications where we can apply them. *See* INFLAMMATION.

RESPIRATION, that important function performed by the lungs and auxiliary organs, by which we constantly draw in and breathe out air, for the purpose of producing certain changes in the blood, which is subjected to the action of the air in the lungs. This is one of the vital functions, which begins at the moment of birth, and ends only with life itself; which cannot be suspended even for a very short period, without great uneasiness and danger. The number of respirations in a minute, differs in different individuals. The average number in a healthy person is about twenty, but in disease they may amount to double that number. It differs from the circulation, in being in some measure under the government of our will, as it is subservient to the formation of speech; it can be rendered deeper, and more or less quick as we wish it. During sleep, it goes on independent of us; and though the mouth be shut, the air finds its way to the lungs by the ever open passage of the nostrils. The motions of respiration consist of an alternate contraction and dilatation of the chest. When the chest is expanded, a vacuum is formed in the lungs, and the air rushes in. The dilatation of the chest is effected by the actions of the two layers of muscles that extend from one rib to another, and which elevate the ribs, and also turn them a little on their own axis; but still more does the diaphragm contribute to this expansion, by changing its position from being convex towards the chest, to a flattened form. In strong efforts of inspiration, and in diseases of the chest, other muscles are brought into action, especially those of the back and shoulders; and this is one reason why the shoulders of consumptive and asthmatic patients are generally raised. The contraction of the chest, or expiration, is effected by the action of the abdominal and other muscles, assisted by the elasticity of the cartilages between the ribs and the breast-bone.

It is not every species of air that is fit for respiration. Some gases cannot be breathed at all, as the epiglottis shuts at their approach, and will not admit them. Such are carbonic acid, and probably all the other acid gases, and ammonia. Some gases kill by preventing the entrance of proper air; such are hydrogen and azote. Others instantly kill, but at the same time produce some change in the blood, as carburetted hydrogen, and carbonic oxide. Some may be breathed for a while, but death ensues at last; as in the case of oxygen, and nitrous oxide. Atmospheric air alone can be breathed for an unlimited time with impunity. It is the oxygen which enters into its composition, that fits it for the support of animal life. This oxygen, too pure and too stimulant to be breathed alone, when combined in the proportion of 21 parts in the hundred to 79 of azote, constitutes the salutary mixture which is necessary to respiration.

The capacity of the chest, the quantity of air taken in at each inspiration, and that remaining after complete expiration, have been differently estimated. Dr. Bostock, whose Essay on Respiration has obtained high approbation from the best chemists, thinks that about forty cubic inches of air are taken in at each inspiration; that the lungs in their natural condition contain about 280 cubic inches; and that about 109 cubic inches are left after an ordinary expiration.

The changes produced on the atmospheric air by breathing, are the following: 1 Part of the oxygen of the air

inspired disappears. If an animal be confined in a limited portion of air, and if this air be not renewed, it becomes, after a certain time, unfit for being breathed, and the animal dies. When chemically examined, the air is found to have lost its oxygenous portion. 2. A quantity of carbonic acid gas, exactly equal to the oxygen which has disappeared, is found in its place. The disengagement of carbonic acid during respiration, is easily seen by breathing through a tube into lime-water; which being perfectly clear, becomes muddy, in consequence of the chalk which the carbonic acid forms with the lime. 3. The air breathed is returned loaded with watery vapour, which is calculated to amount to nearly twenty ounces in a day.

The principal use of respiration being to effect certain changes on the blood, it becomes an important subject to ascertain what these changes are. The whole of the blood circulates through the vessels of the lungs, and during that circulation, it is exposed to the influence of the air which is constantly drawn in. The space over which the air vesicles extend in the lungs, is believed to be at least equal to the surface of the body. The venous blood which has circulated through the system is of a dark purple colour; and at one of the veins, shortly before it enters the heart, the chyle prepared from the food is poured in. By circulating through the lungs, the blood acquires a florid red colour, and the chyle disappears, being, in a way, as yet unknown, converted into blood. A considerable quantity of carbon is abstracted from the blood, and water also is emitted.

Animal Heat, though not yet perfectly explained, seems manifestly to depend on respiration. Man, and the animals who resemble him, have their heat much above the atmosphere which surrounds them; amphibia and fishes, whose mode of breathing is different, have their temperature little raised above the medium in which they live. It has been proved, that the temperature of all animals is proportionate to the quantity of air which they breathe in a given time.

Another most important use of respiration, though not a vital one, is *the formation of the voice* of man and other animals. It is for this purpose, that respiration is partly a voluntary function; the air being transmitted through an aperture varying in its shape and size, produces a sound, which, being in man directed by reason, and modified by the tongue, the lips, the teeth, and neighbouring parts, produces all the variety of articulate sounds, by which we communicate our ideas to one another. Laughing and crying, sobbing and hiccup, are modifications of respiration.

The disorders of respiration are of great importance, and many other diseases of different parts, have the respiration affected by sympathy. The disorders of respiration are asthma, pleurisy, cough, &c.; and in fever, dropsy, and many other diseases, the respiration comes also to suffer, although in the cure of these, we are not to consider, in the first place, the respiration, but the original disease.

RESUSCITATION is the art of reviving persons apparently dead, most commonly applied to the recovery of the drowned. *See* DROWNING.

RETE MUCOSUM. A mucous substance expanded between the outer and true skin. It gives the colour to the body, and therefore is black in the negro.

RETINA. The expansion of the optic nerve at the back part of the eye, on which are painted images of objects, and which is the immediate organ of vision.

RHEUMATISM is a painful affection of tendinous and muscular parts, affecting principally the larger joints, and places covered by muscles; thus it affects the wrists, the elbows, the knees and hip-joint, and the back and loins. The internal parts also, as the heart and diaphragm, are considered to be capable of being affected by rheumatism. When the joints about the back and loins are affected, the complaint is called *lumbago;* when the pain is in the hip-joint, it is called *sciatica;*

and *pleurodyne*, or pain in the side, when the muscles of the chest are affected. Rheumatism may occur either with fever or without it; in the first case it is termed *acute*, and in the second *chronic rheumatism*.

Not long after the application of the exciting cause, the patient feels pain and stiffness in one or more joints when he attempts to move them; this quickly increases, till motion becomes almost impossible, from the excessive pain attending it. Along with this local, and often very general pain, there occurs very strong fever, much thirst, heat, and dryness of skin, strength, fulness, and hardness of pulse. The state of the stomach is not much altered, and the bowels are in their natural condition. The feverish symptoms are somewhat increased towards evening; and when the patient gets warm in bed, the pains are more severe. In a short time some of the affected joints swell, and the pain is a little relieved, but by no means removed. The pain is apt to shift from one joint to another, or at least several joints in succession are attacked; and when the pain seemed to be going off, it sometimes unexpectedly recurs.

Causes. Rheumatism is commonly the consequence of cold applied to the body, especially when accompanied with moisture. Thus it is not an unfrequent disease with sportsmen, who, when hot and perspiring, are too apt to throw themselves down on the wet grass; and with travellers who sleep in damp and ill-dried sheets. Persons who get their clothes wet, and neglect to change them, are often seized with rheumatism.

Diagnosis. "Rheumatism is often so blended with gout as to prevent our seeing which is the principal complaint. In general, rheumatism occurs in consequence of an evident cause, as cold; the gout without any such cause. Rheumatism has no preceding complaints; gout is preceded by languor, flatulency, and indigestion; rheumatism is the disease of the strong and active; gout, of those advanced in life; rheumatism attacks the larger, gout the smaller joints; rheumatic limbs, though swollen, are not red like gouty. The fever of gout remits irregularly; that of rheumatism has exacerbations in the evening, and remissions in the morning. These circumstances will contribute to the distinction; but the cases so often run into each other, and differ by shades so transient and minute, that the greatest difficulty is found in the distinction of particular complaints. Rheumatic pains in the chest resemble pleurisy, and in the abdomen, resemble inflammation of the bowels. In each case, the soreness to the touch, the pain felt at the origin or insertions of the muscles, while the more appropriate symptoms of the real inflammation of the part are absent, will sufficiently mark the nature of the disease." (Dr. PARR.) In lumbago, there is great difficulty of bending the body, which distinguishes it from affections of the kidney, as from stone or inflammation.

ACUTE RHEUMATISM, *Treatment of.* Acute rheumatism is to be considered as an inflammatory and febrile disease, and as such, to be treated in the first instance by blood-letting, in quantity proportioned to the violence of the disease, and the strength and constitution of the patient. There is, however, need of some caution, as a large bleeding or two, if they do not prove effectual in the removal of the disease, will probably have the effect of inducing debility; and of converting the disease into that long continuing and painful state, called chronic rheumatism. It is desirable that the stomach and bowels should not be loaded, and the diet must be spare and far from stimulating. Though the fever would induce us to give purgative medicines, yet the great pain felt on motion, renders it rather desirable not to open the bowels much. One of the most successful modes of practice in rheumatism, is to bring out a copious sweat, and to continue that sweat over the whole body for thirty-six or forty-eight hours. The most effectual and approved method of this is to employ the compound powder

of ipecacuan and opium, commonly called Dover's powder; of this we give ten grains or twelve grains in a morning, having put flannel next the patient's skin, and put him in blankets. When this dose has brought out a sweat, it is to be encouraged by drinking plentifully of warm gruel or barley-water; but if it should fail to occasion perspiration, another dose must be given at an interval of four hours, and this repeated every four hours till a copious sweat breaks out over the whole body. It is proper to abstain from drinking till the sweat does break out, as drinking too soon after taking the powder is apt to occasion vomiting. When the perspiration has continued general and copious for the time we judge proper, the load of bedclothes is to be gradually diminished; the body is to be rubbed dry with warm flannel, and great care taken for some time, not to expose it to cold. This sweating regimen not unfrequently carries off the disease entirely; but on the other hand, it sometimes fails, perhaps from the high fever attending; this must be reduced by bleeding; and indeed the sweating process is both difficult and ineffectual if we do not premise blood-letting. When the pain and stiffness of the joints continue after the sweating, some stimulating embrocation is proper, as turpentine ointment, or volatile liniment, or camphorated oil. If the pain still continues obstinate, it may be necessary to apply a blister to any of the joints or muscular parts that require it. Other sweating medicines have been recommended in rheumatism, as gum guaiac, either in powder or tincture. The Essence of Mustard, which has gained some reputation as an external application in rheumatism, is composed of oil of turpentine, camphor, and a portion of rosemary, to which is added a small quantity of flour of mustard. Such are the symptoms and treatment of acute rheumatism; but this treatment is too often unsuccessful, and the complaint degenerates into chronic rheumatism, a disease tedious, painful, and intractable.

Of Chronic Rheumatism. The chronic rheumatism is distinguished by the pained parts being cold and stiff, and not easily made to perspire, something like palsied limbs; by being worse in cold weather, and relieved by warmth, whether of the atmosphere or when the patients are in bed, by their being very sensible to the changes of weather, and by the general health being not very greatly impaired, at least till the disease has continued many months. The cure of chronic rheumatism is very difficult. Many expedients have been tried, and there is a necessity for varying the treatment in almost all instances of it. Sweating and friction are proper commencements, and these must be followed up by warm bathing, warm pumping, the use of the Bath waters, or sometimes by sea-bathing, by electricity and the frequent use of the flesh-brush. The system is to be invigorated by bark, wine, iron, and other tonics. The ammoniated tincture of guaiac, in the dose of two or three drachms, has been employed with success; also the oil of turpentine, from ten to thirty drops mixed with honey, or what has been a good deal employed of late, cod-liver oil, from half an ounce to an ounce. The above doses are to be taken twice a-day, and persevered in for some time. Much attention is to be paid to the wearing of proper clothing, and not to expose the body to the vicissitudes of the weather, and especially to avoid cold and damp.

RHUBARB, *Rheum palmatum.* A plant, the root of which is much used in medicine. All the rhubarb of commerce grows on the mountains of Chinese Tartary. It is imported into Russia; and what comes to us from thence is always good, as much attention, both in purchasing and transporting it, is paid by order of the government. It is improperly called Turkey rhubarb. Rhubarb has been cultivated in Britain for medical use, but it has not been produced by any means equal to the foreign.

" *Medical use.* Rhubarb is a mild cathartic, which operates without violence

or irritation, and may be given with safety even to pregnant women and to children. In some people, however, it occasions severe griping. Besides its purgative quality, it is celebrated as an astringent, by which it increases the tone of the stomach and intestines, and proves useful in diarrhœa and disorders proceeding from laxity.

" Rhubarb is exhibited, 1. In substance, in the form of powder. It operates more powerfully as a purgative in this form than in any other. The dose for an adult is about a scruple or upwards. On account of its great bulk, it is sometimes unpleasant to take a sufficient dose; its laxative effects are therefore often increased by the addition of neutral salts, or other more active purgatives. In smaller doses, (from three to six grains) it often proves an excellent stomachic. 2. In infusion. Rhubarb yields more of its purgative property to water than to alcohol. The infusion is, however, considerably weaker than the powder, and requires double the dose to produce the same effect. It is well adapted for children, but must be always fresh prepared. 3. In tincture. On account of the stimulating nature of the menstruum, this preparation frequently cannot be exhibited in doses large enough to operate as a purgative. Its principal use is as a tonic and stomachic.

" The virtues of rhubarb are destroyed by roasting, boiling, and in forming the extract."—*(Edinburgh New Dispensatory.)*

Rhubarb is one of the medicines most usefully given to children. As a laxative, it may either be given to them alone in doses of from five grains to ten, in water, gruel or jelly; or two grains of calomel with six of rhubarb may be given; or it may be combined with magnesia, four grains of rhubarb to ten or fifteen of magnesia; or in the form of Gregory's mixture, one part of rhubarb to two of magnesia, with a fourth part of ginger.

The compound rhubarb pills are composed of rhubarb, aloes, and myrrh, flavoured with a little oil of peppermint. They are an excellent stomachic, and may be taken to the extent of two pills every forenoon, while there is weakness of the digestive powers.

RIBS. The series of crooked bones, which form so large and important a part of the walls of the chest. They are twelve in number on each side, varying in length, curvature, and extent of motion; they are articulated with the backbone, and move upon it as an axis, in performing the function of dilating and contracting the chest. The ribs are divided into true and false. The true ribs are those which by their cartilages are united to the breast-bone, and are seven in number; the false touch one another, or float loosely, but do not come so far forward.

The ribs are subject to be broken by external violence, as falls, blows, or the like; and when a splinter of a rib wounds one or more air-cells, air is admitted into the cellular texture of the whole surface of the body, producing the disorder termed emphysema. The best treatment for broken ribs consists in preventing motion by skilful bandaging with broad stripes of flannel; and keeping down inflammation by blood-letting and purgative medicines.

RICE, *Oryza sativa.* An esculent grain much used in the Eastern countries, and answering the same purposes as bread with us. When mixed with other food, it furnishes a wholesome article of diet, as it is not disposed to become sour or to ferment in the stomach; but if it be taken in large quantities, as it is not very stimulant, it is apt to remain long on the stomach, especially if it has been much boiled. When the stomach is weak and relaxed, it requires something stimulant to be taken along with it; and hence in the East, it is generally taken with pepper, curry-powder, or some other aromatic condiment. It is supposed to be in some degree astringent; and in looseness, rice water, called *conjee* in India, will be of service, by its mild mucilage protecting the intestines from acrid fluids.

RICKETS. The disease called rickets is chiefly incident to infants between the ninth month and second year of their age, but sometimes appears between the second and sixth year. The children who are affected with rickets are mostly those who live in moist and damp places, who are poorly fed, and who are not kept cleanly. Since the labouring classes have been collected in large manufacturing towns, it appears to be on the increase. The disease comes on slowly, with a flabbiness of the flesh, wasting of the body, paleness of the countenance, and some degree of swelling of the face. The head appears large in proportion to the body, and the joinings of the bones, are more incomplete than usual; while the *opening* of the head is very large. The forehead becomes unusually prominent, and the neck appears small. The teeth are long of cutting, and soon spoil and drop out. The ribs get flattened, and the breast-bone rises, the spine is bent, the bones at the joints are large, and the long bones between the joints, being smaller and unable to support the weight of the body, bend and continue crooked. In many cases, the child is weak, disinclined to exertion, or unable to walk. The appetite continues pretty good, but the stools are frequent and loose, and the belly is much swelled. Children affected with rickets, in general have their mental faculties very acute, even prematurely so; but in a few cases, they are morbidly dull. Sometimes the disease abates, and the child recovers its health; but the deformity and bending of the bones remains through life. One of the most distressing cases of rickets is that which leaves the female pelvis distorted and contracted, and hence subject to difficult labour, or even rendering labour impracticable.

RICKETS, *Treatment of.* The remedies proper in the cure of rickets are those of a strengthening kind, applied to the whole system, and to the stomach in particular. Cold bathing, when the child is able to bear it, the pure air of the country, removal from damp and moist places, and attention to cleanliness, are among the first requisites. The diet is to be nourishing, and wine is to be given, with bark or quinine. A proper degree of exercise is to be given by carrying the child in a horizontal posture, avoiding all attitudes that might add to the deformity. The digestion is to be assisted by the tincture of rhubarb, or by its powder with a little calomel, and an occasional emetic. The belly and back are to be rubbed with some stimulating liniment or anodyne balsam, as camphorated oil, or the soap liniment. When the teething of rickety children is difficult, we are to apply the appropriate remedies; and in every instance, to pay most particular attention to the stomach and bowels. A rising of one shoulder sometimes occurs in young women between twelve and fourteen, and is to be regarded as a degree of rickets. The arm of that side should be tied up, and the other alone employed for some months. Steel stays, very accurately fitted, should be worn for a long period.

RING-WORM. A disease of the skin appearing in small circular patches, or rings of vesicles round the circumference of a circle of apparently healthy skin: these vesicles are small, and contain a transparent fluid, which is discharged in three or four days, when little dark scabs form over them. Sometimes there is a succession of the circles on the upper parts of the body, as the face and neck, and the arms and shoulders. Dr. Bateman thinks that though the ring-worm has been observed in several children in one school or family, at the same time, it is not contagious, but probably to be attributed to the season or some other common cause. There is another disease of the scalp, popularly termed ring-worm, and manifestly contagious, to which we shall advert, when we have spoken of the treatment of the true ring-worm. The ring-worm is not unfrequently, by the common people, besmeared with ink; and by the use of this, or

other astringent and stimulant applications, the pain and itching are much relieved; and other solutions of the salts of iron, copper, or zinc, or alum, or ointments into which the same ingredients enter, will answer the same purpose.

Of the Infectious RING-WORM. The more formidable and infectious species of ring-worm appears in distinct patches of an irregularly circular figure, on the scalp, head, and neck. It commences with clusters of small light yellow pustules, which soon break and form thin scabs over each patch; and these, if neglected, become thick and hard by gathering on one another. If the scabs are removed, however, the surface of the patches is left red and shining, but studded with white elevated points, in some of which, minute globules of pus again appear in a few days. As the patches extend, the hair covering them becomes lighter in its colour, and sometimes breaks off short; and as this process is repeated, the roots of the hair are destroyed, and at length, there remains uninjured, only a narrow border of hair round the head. It generally occurs in children of three or four years old and upwards, and often continues for several years. It can be considered as about to terminate, only when the redness and exfoliations disappear together, and the hair begins to grow of its natural colour and texture. The disease seems to originate spontaneously in children of feeble and flabby habit, or in a state approaching to marasmus; who are ill fed, uncleanly, and not sufficiently exercised; but it is principally propagated by the actual conveyance of the matter from the diseased to the healthy, by the frequent contact of the heads of children, but more generally by the use of the same towels, combs, caps, and hats.

Treatment. While the patches are in an inflamed and irritable condition, we must be content with regular washing or spunging with warm water, or some emollient fomentation. Even the operation of shaving, which is necessary to be repeated at intervals of eight or ten days, produces a temporary increase of irritation. At this time, all stimulant lotions and ointments should be avoided. The disease assumes various forms, and these require a corresponding variety in the treatment; so that no single application can be said to possess any unfailing power against the ring-worm. When the inflammatory state subsides, a dry scabbing and exfoliation ensues, but again the pustular eruption breaks out, and the patches again become red and tender. In other instances, the surface becomes inert and torpid, while a dry scaly scab constantly appears, and active stimulants are requisite to effect any change in the disorder. In more irritative states, the milder ointments, with calomel, oxide of zinc, acetate of lead, should be employed, or sedative lotions, or decoctions or infusions of poppy heads or tobacco. When there is an acrimonious discharge, the ointments of zinc and lead, or the milder mercurial ones, or a lotion of lime-water with calomel, are advantageous. In a very dry and inert state of the patches, caustic substances are often very successful. Sometimes a solution of nitrate of silver, six grains to the ounce, or the mineral acids slightly diluted, or the application of a blister, removes the diseased skin, and the new one assumes a healthy action. But in the varying forms and degrees of ring-worm, the remedies must be varied, and combined, according to the degree of irritation which prevails. Dr. Bateman disapproves of the rough methods of practice, by which the hairs are forcibly removed; as he thinks they inflict great injury on the scalp, and retard, rather than expedite the progress to recovery. In general, the system at large is not affected, and little internal medicine is necessary; but in weakly constitutions, bark and the preparations of iron, with nourishing diet, are to be prescribed; and attention must be paid to the patient's diet, clothing, and exercise.

ROCHELLE SALTS, *Tartrate of Potass and Soda*, a purgative salt of great utility, as being an excellent cooling laxative, without the nauseous taste that some others of the neutral salts possess. The crystals are large and beautiful; the dose is from six drachms to an ounce or an ounce and a half. They get their name from having been originally made at Rochelle, by an apothecary of that town named Seignette, whence they are also called *Sal Seignetti*.

ROSE, Erysipelas, *or* St. Antony's Fire. The rose is a complaint, which comes on with shivering, thirst, and other feverish symptoms; and which afterwards affects some part of the skin with swelling, and redness of an uncertain extent, on which blisters very commonly rise. It attacks various parts of the body, and very frequently the face. At the beginning of the disease, there is confusion of head, and some degree of delirium; and there is not unfrequently considerable drowsiness. About the second or third day, a slight redness appears, which gradually spreads till it has occupied the whole of the face, and from the face it extends to the scalp, and down the neck. The redness does not continue equally bright on all the parts affected, but fades a little on those where it began. The swelling is considerable, and sometimes so great as to disfigure the countenance, and to shut up the eyes. Blisters of various sizes, containing a thin yellowish liquor, rise on several parts of the face. Where blisters do not rise, the skin scales off at the conclusion of the disease. The fever and inflammation usually continue from eight to ten days. The severity and danger of the disease is to be judged from its effects on the brain. If there is much delirium and drowsiness, it portends great danger, especially when they appear early in the disease; but the absence of these symptoms is to be accounted favourable. When the rose attacks other parts of the body, there is seldom any delirium, but the inflammation very frequently ends in the formation of matter, which, indeed, is sometimes the case in the swelling of the eye-lids. Those who have once or oftener had rose, are liable to frequent returns of it.

Causes. It arises in many cases without any obvious cause; sometimes it is owing to exposure to a strong heat, or intemperance; it is often a symptom of wounds and punctures, and of the application of poisons, as the stings of insects. The worst kind is that which arises in debilitated constitutions or dropsical habits, and in those who are addicted to the use of strong liquors.

Treatment. As the rose is evidently a febrile and inflammatory complaint, our method of cure must be by the means of lessening inflammation; but the delirium and drowsiness in some cases, and the putrescent and debilitating symptoms in others, have rendered the use of bleeding and copious evacuations a very doubtful piece of practice. Unquestionably, if the pulse be full and hard, with great heat of skin and thirst, and if the other feverish symptoms are high at the commencement, we are to judge by these symptoms, and not by the name of the disease, and to bleed and purge accordingly; but we must be cautious to what extent we carry those practices, and especially be cautious how we repeat them. We are to enjoin rest and quietness, to give laxative medicines, to encourage a gentle perspiration by diluent drinks, or sweating medicines that do not stimulate. Sinapisms applied to the feet, are of great advantage when the head is much affected. The diet is to be very sparing; and it is not till the disease abates, or signs of weakness come on, that we are to venture upon nourishing diet, bark, or wine. In rose, it has not been thought safe to make use of any watery or oily applications, as they seem rather to occasion the spreading of the inflammation; and the application most commonly employed is some dry powder, as being the most innocent. It is not to be too thickly laid on, lest we increase the heat and inflammation, and prevent any tendency there

may be to perspiration; and when the blisters break, it may occasion inconvenience by the matter forming crusts with the flour. It is still the safest application, and may always be put on in domestic medicine; but it should be left to a medical man to determine whether any cooling lotion may be advisable. When there is evident tendency to suppuration, we are to apply poultices to bring it forward, and when the abscess is formed, to treat it in the common way; but we must, in many cases, expect an ulcer deep and difficult to heal.

"If a gangrene is threatened, besides the inward use of camphor and the bark, spirituous and astringent applications should be employed externally, such as mixtures of lime-water with camphorated spirit, or camphorated spirit mixed with tincture of myrrh, or an infusion of the bark.

"Erysipelas is sometimes of the nervous or low kind; appearing with a puffy redness in the skin instead of a swelling; the pain is more acute, but the throbbing of the vessels less; no circumscribed tumours appear, but the parts are more inflamed; at the decline of the disease, the redness of skin becomes of a purple hue; it is very liable to terminate in a mortification. The habit from the first, and throughout, is very irritable, and the strength depressed. It is generally accompanied with heartburn, itching, inflammation of the skin, painful ulcerations, and small lucid pustules.

"In some strong habits, both a phlegmonous and the low erysipelatous inflammation occur together; in which case, a moderate evacuation of blood may be allowed, but should be cautiously attempted. If the patient labours under great depression of strength, irritability, &c. we must support his strength with wine, and the warmest cordials; when blisters rise, the bark may be freely given, from six drachms to an ounce, or more if the stomach will bear it, in twenty-four hours, (or proportionate doses of the sulphate of quinine, three grains every four hours). When the eruption is apparently complete, and the pustules ripened, snip the blisters, and absorb the fluid with soft rags, then apply spermaceti ointment, or Turner's cerate." (Parr's *Medical Dictionary.*)

Infantile Erysipelas. This affection was first distinctly described by Dr. Underwood. It never appears after the month, but most frequently shows itself a few days after birth. Children are sometimes born with it; in a few instances, it is preceded by jaundice, or a locked jaw. It attacks suddenly the most robust as well as the most delicate children, and its progress is rapid; the skin turns of a purplish hue, and soon becomes very hard. The milder species appears often on the fingers and hands, or the feet and ankles, and sometimes upon or near the joints, suppurating very quickly. The more violent kind is almost always situated at the lower part of the belly, extending upwards, and down the thighs and legs; though it sometimes begins in the neck. The swelling is moderate; but after becoming hard, the parts turn purple, and very often sphacelate, especially in boys, when it falls on the scrotum.

Various means have been used with little success, though for a time benefit was apparently received from saturnine fomentations and poultices, applied on the very first appearance of the inflammation; but it soon spread, and a gangrene came on. When matter is formed, the tender infant soon sinks under the discharge. Bark and camphor are recommended when mortification threatens. The greatest number of infants attacked with this disorder are carried off; many of them in a very few days. (*See* Parr, *Article* Erysipelas.)

ROSE, *Rosa Gallica.* A well known fragrant flower, principally used in pharmacy to obtain rose-water, which forms an elegant solvent for astringent salts, that are employed as washes. A solution of sulphate of zinc in rose-water, in the proportion of two grains to the ounce, forms a good wash for sore nipples. An

infusion of rose-leaves is turned to a beautiful red colour by the addition of a little sulphuric acid, and in this form is employed as a gargle in sore throat.

ROSEMARY, *Rosmarinus officinalis.* A large shrubby plant, with flowers of a pale, bluish colour. It is a native of the southern parts of Europe, but is cultivated in our gardens. Rosemary has a warm, pungent, aromatic, bitter taste, and a smell approaching to that of lavender, 'oined with the odour of camphor; crystals of which last are deposited when the plant is long kept. What virtues it has are of a stimulant nature; and it is sometimes used in nervous headach, and hysteria. The leaves and tops yield an essential oil, the dose of which is from three to five drops. From this oil and rectified spirit, a spirit of rosemary is prepared; of which the dose is from half an ounce to an ounce. Hungary water, when genuine, is a pure spirit distilled from the rosemary, and is strongly scented with the rich perfume of the plant.

ROVING. *See* DELIRIUM.

RUBEFACIENTS. Substances employed to give to the skin a degree of irritation less than what is given by a blister. This is done by mustard, by hartshorn, more or less diluted, and by some other substances. The effect of rubefacients is to relieve internal pain, without producing the excoriation or watery discharge that a blister does.

RUE, *Ruta graveolens.* A small shrubby plant, a native of the south of Europe, and cultivated in our gardens. It has a strong, unpleasant smell, and a bitterish taste. The leaves are very acrid, and blister the skin when much handled. It has been said to be a powerful stimulant; serviceable in hysterical complaints, and uterine obstruction; but it is merely an antispasmodic of no great powers. It is used in the form of extract, from ten to twenty grains, or the volatile oil, from five to ten drops.

RUM. The ardent spirit obtained by distilling the fermented juice of the sugar cane. Its general properties agree with those of other distilled spirits, but from its peculiar flavour it is less agreeable to some stomachs and palates than others.

RUPTURE, called in surgical language HERNIA, signifies the displacement of any of the internal organs from their natural situation; but it is more commonly applied to that disease, which arises from the bowels getting through some of the apertures designed for the transmission of other organs. When the parts of the bowels or omentum which have protruded can be replaced by change of posture or by the hand, the hernia is said to be *reducible;* when it is not, it is called *irreducible hernia;* and when dangerous or painful symptoms are brought on by its being constricted, it is said to be *strangulated.*

Ruptures are inconvenient and dangerous in proportion to their bulk, to the place where they occur, and to the stricture or pressure they undergo; and without entering upon the discussion of the more uncommon and obscure kinds, we shall mention those which are generally met with, and which, by their frequent occurrence, demand attention. 1. *Inguinal Hernia,* or that which occurs in the groin. There is, at the lower part of the belly, and towards the middle line, a passage through the muscles of the belly for the transmission of certain organs, which in the male sex are lodged in the scrotum, and in the female are distributed among the skin at the sides of the labia. Through these openings, the bowels are sometimes protruded, either by the apertures being unusually large, or by some stress or violent exertion of the body. Some portion of the bowels is thus forced downwards in the direction of the scrotum, occasioning a greater or less swelling in that part; or the bowels may be pushed out so very little, as to form merely a small and hardly perceptible swelling in the groin. 2. *Femoral Hernia* is that which appears at the upper part of the thigh, or at the opening by which the great blood-vessels enter into and pass out of the abdomen. 3. *Umbilical*

Herniæ signify those ruptures which occur at the navel. Ruptures also occur at various other parts, but much more rarely than at those above mentioned.

When a rupture comes on suddenly, in consequence of any violent exertion, the patient has the sensation as if something had given way, and the pain is considerable. But many persons are afflicted with rupture, in whom it has come on gradually, and in whom there are large swellings, giving no inconvenience but what arises from their bulk. But a person who is ruptured, can never be sure that things will remain in a quiet state; because from external violence, from unusual exertion, or from causes unknown, dangerous symptoms may speedily come on. Sometimes ruptures return into the cavity of the belly when the patient is in the horizontal posture, or they can be replaced with a little manual assistance; but in other cases, from the great quantity of intestine that is down, from adhesions having been formed between it and the neighbouring parts, its reduction is impracticable. When a rupture can be replaced, it is proper for the patient to wear a truss, which, when well made, gives the necessary support to the bowels, and prevents their being pushed out of the cavity: the wearing of it is attended with no inconvenience; and even very young children may wear a truss if it be properly fitted. When a truss cannot be worn, or when the rupture cannot be put up, all that remains is for the patient to take as much care as possible, that no injury or blow be inflicted on the tumour, to guard against costiveness, and to avoid violent exertions of every kind; and in children, care must be taken to prevent crying, and all such motions as are apt to increase or occasion rupture.

Causes. There are some persons in whom rupture takes place more easily than in others, and in whom it is constant. The reason seems to be, that the parietes of the abdomen, or the neighbourhood of the openings in it, are more lax and yielding in them than in others. It is common in warm climates, in old people after long illnesses or debilitating fevers, and in the poor who have laboured hard and been ill fed. The circumstance which immediately occasions ruptures, is generally some violent exertion, which implies a strong action of many muscles, especially those of respiration; hence ruptures are brought on by lifting or carrying heavy weights, jumping, running, vomiting, straining at stool, the efforts of women in childbed; or by coughing, sneezing, crying, laughing. As the whole of the human race are continually exposed to some one or other of these exertions, and as ruptures are comparatively rare, we infer that those to whom they occur, have some peculiar laxness in the structure of the parts through which the bowels protrude.

Rupture, *Symptoms of, when it is reducible and not strangulated.* A swelling in some part of the belly; this diminishes a little on pressure, but returns when the pressure is withdrawn; it goes off when the patient lies down, and is increased by coughing. Patients with rupture are sometimes troubled with indigestion; but frequently, all the functions of the alimentary canal are quite regular. When we succeed in getting up the bowels, there is commonly what is called a guggling noise.

Rupture, Strangulated, *Symptoms of.* When either an old rupture from some cause has become strangulated, or when some sudden exertion has at once produced rupture and strangulation, the following symptoms occur: There is a swelling at the place of the rupture, painful to the touch, and increased by coughing, sneezing, or by the upright posture. These symptoms are followed by sickness, retching, costiveness, with a frequent hard pulse, and other attendants of fever. The cause of these symptoms is the stricture made on the bowel, by the part through which it protrudes. The object of cure, is therefore to relieve the bowel from this pressure, which is to be effected either by returning the intestine

into the belly, by the same aperture through which it came out, or enlarging the aperture by an operation.

Treatment. We are first to endeavour to replace the bowel by the hand, if possible; and various methods are to be put in practice, to produce the relaxation necessary for that purpose. The surgeon is to place the patient with the thighs bent; and he is to make pressure on the tumour in a direction upwards and outwards. In a young and strong person, bleeding is very proper, both to induce relaxation, and to prevent inflammatory symptoms. The warm bath may be tried also to induce relaxation. With a view to diminish the bulk of the swelling, and so to render it more easily replaced, cold has been applied to the external parts, by means of ice or of ether. An injection of the infusion of tobacco produces an extreme relaxation of the whole system, and so has conduced to the replacement of protruded bowels. The strength of the infusion is a drachm of the leaves to an English pint of boiling water; this is infused for ten minutes; one half is injected at first, and the other a little afterwards, if no proper effect is produced by the first. The tobacco injection is a remedy of the greatest danger, and must never be administered, except by an experienced practitioner. These attempts to reduce the bowel, must be made for a longer or shorter period according to the symptoms of each case. Much handling will add to the danger of inflammation which is already so great; and too long delay will allow the bowels to get into a state of mortification. When we have decided that an operation is necessary, it is to be performed by making an incision through the skin and other coverings, till we reach the sac containing the gut; we are then to ascertain the situation of the part that causes the stricture, and, guided by the finger, or by an instrument called a director, we are to divide with a bistoury in the proper direction. It is unnecessary to trouble the general reader with more than the plan and outline of the operation, and what is intended by it. If the bowels are in a fit state to be replaced, and the operation is successful, the first favourable symptoms will be a cessation of the vomiting, and a free discharge by stool; and after the wound is dressed, we are to watch lest inflammation come on. Rest and quiet are to be enjoined, and occasional mild laxatives are to be given. After the cure is completed, the patient should wear a truss, probably for life; and ever after be cautious not to use any violent exertion.

Ruptures *in Infants.* "Ruptures in different parts, especially at the navel, are not unfrequent occurrences; fortunately, they are not attended with so much danger as similar disorders in grown people. When the disease is confined to the navel, a broad piece of flannel, in the form of a roller, together with pieces of adhesive plaster applied over the part with a ball of cotton, forming what has been termed by surgeons a *graduated compress*, by affording a safe and firm support, prove so useful, that as the infant acquires strength, the rupture commonly disappears. The other varieties of rupture are often cured by the natural increase of size and strength of the body, and require chiefly attention to the due regulation of the bowels, and the daily use of the cold bath. No truss ought to be employed for at least the first two years of life." (Professor Hamilton.)

RYE, *Secale cereale.* A sort of grain much used for food in the northern countries of Europe. It is less nourishing than wheat, but sufficiently nutritive and wholesome. It is a good deal disposed to turn sour on the stomach, and to open the bowels, when people first begin to use it.

There is a black morbid excrescence, curved like the spur of a fowl, which is found on the spikes of rye. This is supposed to be occasioned by the depredations of an insect. It is called the ergôt of rye, and when powdered and mixed with rye-flour, or taken into the stomach alone, it produces poisonous effects. The

symptoms produced are intoxication, lassitude, a sense of something creeping on the skin, with convulsive movements occurring periodically. This affection is called *raphania*. Some have epileptic or maniacal symptoms; some, unquenchable thirst; and livid eruptions and cutaneous ulcerations are not uncommon. The disease continues from ten days to two or three months, or longer. Sometimes the skin in the neighbourhood of the fingers and toes becomes dry, hard, and black. Milk is the best corrector of the bad effects of ergôt, in the mouth. Emetics, purgatives, and clysters, are to be given for the convulsions and other symptoms; and afterwards stimulants, as ammonia, camphor, and ether. The diseased skin is to be dressed with oil of turpentine, and afterwards warm stimulating fomentations and poultices are to be applied.

The ergôt has been used for medicinal purposes, and is said to act powerfully on the uterine system. But it has not been long enough employed to ascertain exactly its effects, or to be properly brought under the notice of the general reader.

S

SAG

SABINE *or* SAVINE, *Juniperus sabina*, is a plant of a strong and peculiar odour, and of an acrid and bitter taste. It has been thought a powerful stimulant of the uterus, and as such has been occasionally employed in obstructed menstruation. It is used in the form of extract to the extent of ten grains, or five drops of the essential oil twice a-day. The powdered leaves are used in ointments to render them stimulant, and are thus applied to indolent sores, and to keep up the discharge from issues.

SAFFRON is the summits of the pistils of the crocus, *Crocus sativus*. The smell is pleasant and aromatic; their taste is an aromatic bitter, and they tinge the saliva of a deep yellow colour, when chewed. Saffron had formerly considerable reputation in uterine obstructions; but its medicinal powers are very small, and it is now used merely for its aromatic flavour, and to impart its bright yellow colour to other substances.

SAGE, *Salvia officinalis*, is a plant having a warm aromatic taste and smell, with some degree of bitterness and astringency. It is taken in the form of infusion, and drank like tea for its stimu-

SAL

lant, carminative, and tonic effects. With a little lemon-juice, sage tea is used as a diluting drink in feverish disorders.

SAGO. An article of food, pretty commonly used for the diet of children and invalids, resembling starch in many of its properties, and forming a bland, mucilaginous, and nutritive substance. It is obtained from the pith of several species of palm, and is shaped into grains by being passed through a coarse sieve when half dry. A dessert-spoonful of these grains, by being boiled, will form a pretty large bason of mucilage; and may be taken with wine, milk, or sugar, as we find convenient for the patient.

SAINT ANTONY'S FIRE. *See* ROSE.

SAINT VITUS'S DANCE. *See* DANCE, &c.

SALADS are those leaves and stalks which are eaten at table, not for nourishment, but as condiments. The chief of these are lettuce, water-cresses, endive, and celery. Some of them are blanched, and so deprived of their acrimony. Oil, vinegar, and salt, are generally mixed with salads. Vegetables eaten in this way are very refreshing, in the heats of summer; and temper the feverish ex-

citement which full meals of animal food are apt to occasion. Persons troubled with indigestion should rarely touch any of them, except the water-cresses.

SALIVA. The spittle, or liquor secreted by various glands which open into the mouth, and pour in the fluid so necessary in the mastication of the food, and in digestion. The saliva is poured into the mouth in the greatest abundance at the time when it is most wanted, that of eating; and this is owing both to the motion of the jaws, and to the stimulus imparted by the food and seasonings which we use. The saliva is increased by various acrid substances applied to the tongue and parts within the mouth, as ginger, pellitory, and very many others.

The saliva sometimes becomes very viscid, occasioning continual hawking; sometimes it is very thin and copious, and flows from the mouth in great quantities. Thirst does not seem to be very dependent on the quantity or nature of the saliva; sometimes, when the tongue and fauces are black and parched, little complaint is made of thirst; and again, the most abundant flow of it, does not impart the moist sensation of health. The state of the digestive powers seems to be the cause of these vitiations of the saliva. When the saliva is not swallowed as it ought to be, the digestion becomes injured; as is sometimes seen in those who chew tobacco, and in some maniacs who are constantly spitting.

SALIVATION. The flow of saliva, and the action of the glands, which secrete it, is increased in a wonderful degree by the action of mercury, introduced in various ways into the system. Whether it be rubbed in, in the form of ointment, or slowly given by the mouth in the form of blue pill, or calomel, it produces salivation; and it is by this effect that we judge the mineral to have entered the system, and to be there exerting its peculiar power. When the salivary glands appear swelled, when the breath becomes tainted with a peculiar fetor, we consider the patient to be under the influence of mercury, or to be salivated. In the practice of physic, not many years ago, long and severe salivation was thought necessary for the cure of several diseases; and the effects were so debilitating, that not a few had their constitution irretrievably ruined, not by their disease, but by the mercury. It is now admitted by all intelligent practitioners, that such a severe exhibition of mercury is not necessary, and that all the good effects to be expected from it, may be procured by keeping the mouth and gums a little tender for the time we think necessary, withdrawing or resuming the mercury as the mouth is more or less affected. *See* MERCURY.

When salivation is excessive, and the mouth and tongue sore and ulcerated, we are to use the solution of borax and honey, as a topical application, and to diminish the irritation of the system by laxative medicines, chiefly the neutral salts. Dover's powder is a good way of exhibiting opium in profuse salivation. A person under salivation should beware of exposure to cold, as it is apt to induce painful swellings of the salivary glands and tonsils.

SALMON may perhaps be considered as the most nutritive of our fish; but it is heating and oily, and not very digestible; and persons even with strong stomachs are frequently under the necessity of taking some stimulant to assist its digestion. The addition of lobster-sauce renders it still more unwholesome; the best condiment that can be used is vinegar. As connected with the time of spawning, the season of the year has the most decided influence upon the quality of salmon. It is in the highest perfection some time previous to its spawning; the flesh is then firm and delicious; whereas, after this event, it is for some time unfit for food. The eating of the fish at such times has been often found to be productive of disease. Hence the legislature has fixed the periods at which salmon fishing is lawful. Salmon trout is not so rich and oily as the salmon. Al-

though, therefore, it is less nutritive, it is, at the same time, less heating, and more digestible. (Dr. Paris *on Diet.*)

SALT, in strict chemical language, means any thing which is soluble in water, and which has a taste; but when this term is used without any addition, we commonly mean the *Muriate of Soda*, or *Common Salt;* that which gives its saltness to the ocean, and which is so universally taken as a seasoning to the food. It is justly reckoned a necessary of life, and few stomachs could digest their food without its assistance. When salt is not used in sufficient quantity; or when, from any circumstance, it cannot be procured, very bad effects follow. The digestive powers are weakened, the body becomes emaciated, and worms are generated. This is said to occur frequently in Ireland, where the lower classes are much infested with worms, from the bad quality of their food; and a draught of salt and water is found very useful in expelling them. An illustration is also given of the bad effects of wanting salt, in the punishment once inflicted on criminals in Holland, by feeding them on bread made without salt; the consequence of which, was the production of numerous worms, and the death of the unhappy sufferers in consequence.

Salt is a great preventer of putrefaction, and as such is employed in the curing of animal food, fish, &c. Food which has been thus prepared, smoked, and dried, is, in some measure, difficult of digestion, and should not be indulged in by those who are troubled with stomach complaints, or who are subject to inflammatory and erysipelatous disorders.

Though a certain proportion of salt is indispensably necessary as a condiment to our food, it is well known that an excess of it is extremely injurious. It is thought by the latest inquirers, that when meat is preserved by being salted, a chemical effect is produced on such meat; and that it is a very different thing to take salted meat, and the same quantity of salt and meat which have not entered into this chemical combination. The principal and most fatal disease occasioned by living on salt provisions, is the sea-scurvy; and the tendency to this is to be checked by vegetable diet, or when this cannot be procured, by lemon-juice. *See* Scurvy.

SALTS. In common language, when we talk of *Salts*, we mean the neutral, alkaline, or earthy salts, commonly used as laxatives. Of these, there are several of great utility in medicine, as the sulphate of soda, or Glauber's salts, which has been nearly superseded by the sulphate of magnesia, or Epsom salts. We also use very frequently the Rochelle salts and the phosphate of soda, or tasteless salts. The general dose of each is about from six to ten drachms, dissolved in four ounces of tepid water, and taken in the morning.

SAMPHIRE, *Crithmum maritimum.* A plant that grows about the sea-coast in several parts of Great Britain. It has a spicy aromatic flavour, and when pickled with vinegar, it makes an elegant condiment, much esteemed.

SARCOCELE. A scirrhous disease of the testicle, of which the first appearance is an enlargement and hardness of the body of the testicle, without pain or inequality of surface, and occasioning little uneasiness except by its weight. Sometimes, very soon after its appear ance, it becomes unequal and knotty, with acute pains darting to the loins and back, but the skin still remains entire. Sometimes, the disease produces a large foul ulcer with hard edges.

Treatment. Though the disease in some cases remains quiet for a length of time, yet, in many others, it becomes suddenly worse, and even fatal. It is now pretty generally admitted, that as soon as a patient is quite ascertained to have a scirrhous testicle, the only safe plan is to have it removed. This, in general, relieves the patient; though in some cases, the same disease may seize on other parts, and render the operation unavailing.

SARDONIC LAUGHTER. A convulsive action of the diaphragm and other parts, giving the appearance of ghastly and unnatural laughter. It is a closing symptom of several fatal diseases.

SARSAPARILLA, *Smilax sarsaparilla*, a plant growing in South America, the roots of which had great celebrity many years ago, for their power of curing syphilis. It is now agreed, that sarsaparilla has no power whatever in the cure of true syphilis, though it has some good effects in certain cutaneous disorders. It is of service to those anomalous pains in the bones and joints, the sore throat and other symptoms, which appear to be owing to the combined effects of mercury and syphilis. In spreading sores, in some forms of scrofula, and in debilitated constitutions, it has done good. The best way of using it is in decoction, of which a pint is to be taken daily, or an ounce of the powder. It produces a pretty copious perspiration, and in weak constitutions this may require to be checked by the addition of a little sulphuric acid or elixir of vitriol.

SCALD is the term used to signify the injury inflicted by heated fluids, as boiling water, oil, &c. Under the article BURNS, we have mentioned the proper treatment of the injuries occasioned by the application of too great heat, whether in a dry or liquid form.

SCALDING, *or* CHAFING *of the Skin of Infants*. *See* EXCORIATION.

SCALLED HEAD, the *Porrigo favosa* of Willan. An eruption on the head, of large flattened pustules, with an irregular edge, and surrounded by a slight inflammation. They most commonly spread from the scalp, especially from behind the ears, to the face; or from the lips and chin to the scalp. They are usually accompanied with considerable itching, and occur most commonly in children. The pustules, especially on the scalp, appear at first distinct, though near together; but on the face and extremities, they generally rise in irregular clusters, becoming confluent when broken, and discharging a viscid matter, which gradually concretes into greenish, or yellowish semi-transparent scabs. The disease extends by the successive formation of new blotches, which sometimes cover the chin, or surround the mouth, and spread to the cheeks and nose; and the ulceration spreads in a similar manner over the head, by which the hair and moist scabs are matted together. Vermin are often generated in great numbers, and increase the itching and irritation of the disease. Children, by picking and scratching at the edges of the scabs, occasion a similar aggravation of the disease on the face, and extend the ulceration. These ulcerating blotches give occasion to swellings in different parts, as the neck and behind the ear; these inflame, suppurate with much pain, and give rise to tedious discharges. Acrid matter also comes from behind the ears, or from the ears themselves, and there is inflammation of the eyes, or obstinate ulcerations of the edges of the eye-lids. The discharge sends forth an offensive vapour, which affects not only the organs of smell and taste, but the eyes of those who examine the diseased parts; and this matter inoculates sound parts of the body by touching them; and the arms and breasts of nurses are liable to be affected in the same manner.

Treatment. Small doses of calomel may be given internally; and the diet and exercise should be carefully attended to; fruits and raw vegetables should be avoided, as well as heating stimulating food; and the diet should consist of milk, puddings, and a little plain animal food or broth. If the patient be weak, and much troubled with glandular swellings, the bark and chalybeates will be of service. It is very seldom proper to use stimulant applications externally, as there is commonly some inflammation present. An ointment of oxide of zinc, or sugar of lead, is best, when the discharge is copious; and the citrine ointment, with equal parts of simple cerate and cerate of

litharge, is generally beneficial. Dr. Bateman disapproves of all stiff coverings, as of oiled silk, and of the popular application of cabbage leaves or the like, as he has seen very hurtful irritation, inflammation, and copious discharge of matter induced by this practice; which symptoms are best subdued by the application of an emollient poultice for a day or two; and then the mild applications above mentioned.

SCALP, *and* INJURIES *done to it.* The scalp is the integuments of the head, covered by the hair. These consist of common skin, which in the head is very dense and firm; of the tendons of a muscle which corrugates the forehead; and close to the bone is the pericranium. The scalp is subject to a variety of diseases; to the one detailed in the preceding article, and many others. From the firm, unyielding texture of the scalp, if inflammation takes place in it, that inflammation is not of the kind that suppurates and forms a circumscribed abscess; but it is of the erysipelatous kind, which spreads to a great extent, and is apt to end in gangrene. (*See* ROSE.) From the communication which is kept up by blood-vessels between the parts within and outside of the skull, it must be obvious that all diseases, wounds, or other injuries of the scalp may be attended with more serious consequences, than a similar injury done to the skin at any other place. When a clean cutting instrument has inflicted a wound on the scalp, the lips are to be brought together by plaster, or by a suture, if the plaster is not sufficient; and inflammation is to be kept down by cooling lotions, purgatives, and the antiphlogistic regimen. Small wounds made with an instrument that punctures rather than cuts, are more apt than larger ones to become inflamed, and to be troublesome. The treatment in such cases is to be directed to the prevention of general fever; and to relieve the local disorder, sometimes by enlarging the wound, sometimes by applying leeches and emollient poultices. The constitution of the patient has much influence on the nature and progress of wounds of the scalp. In constitutions subject to the rose, or weakened by intemperance, the case is generally bad.

When a smart blow has been received on the head, and mischief has ensued to the brain or its coverings, an indication of that mischief is very commonly furnished by the scalp, whether it has been wounded by the original blow, or has been left entire. Some days after the accident, the part which was struck swells, and becomes puffy and tender, but not painful; the swelling does not rise to any considerable height, nor spread to any great extent; if this tumid part of the scalp be divided, the pericranium will be found of a darkish hue, and either quite detached, or very easily separable from the skull, between which and it will be found a small quantity of a dark-coloured matter. (POTT *on Injuries of the Head.*) *See* SKULL.

SCAMMONY. A resinous substance of a purgative quality, obtained from a plant which grows in Syria and other countries of the East, *Convolvulus scammonia.* Its purgative qualities are pretty strong and effectual; it may be given in powder from three to eight grains, combined with calomel or with jalap; and it forms an active ingredient of the very useful pills, termed the compound colocynth pills. Scammony is good for cleaning the bowels of children when loaded with slime; for this purpose it is given combined with calomel; and a compound of equal parts of calomel, jalap, and scammony, much used for this purpose, is known by the name of *pulvis basilicus.*

SCARBOROUGH WATER. A chalybeate water, with an admixture of a saline purgative water, found at Scarborough, on the coast of Yorkshire. It is thought to be beneficial in the same class of complaints as those of Cheltenham; while the additional advantage of sea-bathing may contribute to the efficacy of the mineral water.

SCARLET FEVER, *Scarlatina*, either mild, or malignant with putrid sore throat, exhibits different forms of a disease which is propagated by a specific contagion, like small-pox or measles, and like them is believed by the best observers to attack a person only once during life; though the apparent exceptions to this remark are more numerous in scarlet fever, than in the other two diseases above mentioned. On the third or fourth day after exposure to the contagion of scarlet fever, a feverish attack occurs; and about the second day of this fever, a bright scarlet rash appears on the surface of the body, and within the mouth and about the fauces. The scarlet fever varies much in its degree of malignity and danger, even during the same epidemic; in some cases being so slight as to go off without the aid of medicine; in others, being accompanied with symptoms of great and fatal putrescency. It will be proper to notice separately, the mild and fatal scarlet fever; and to notice some cases, in which the symptoms are irregularly combined.

Mild Scarlet Fever. The milder form of scarlet fever is distinguished by the rash, with a moderate degree of fever, and with very little affection of the throat. The rash first appears in innumerable red points about the neck and face, and by the next day they are seen over the whole surface of the body. About the fourth day, the eruption is at its height, and on the fifth it begins to decline. The surface of the mouth and fauces appears red, and little red points appear on the tongue rising up through the white crust which covers it, and when this crust comes off, the whole is red and sore, and the points are still prominent, giving an appearance like a strawberry. There is sometimes considerable swelling of the face, and of the throat.

This is the mild form of the disease, so mild as hardly to require the aid of medicine, but which by mismanagement and officiousness, may have the feverish symptoms increased, and some inconvenience, if not danger, induced. The patient should be kept cool and quiet, should not be overloaded with bedclothes; his diet should be sparing, and cooling drinks and mild laxatives should be recommended.

Scarlatina, *with severer* Fever. In other cases of scarlet fever, the febrile symptoms at the commencement are more severe; there is a sensation of stiffness and pain on moving the neck, and it is also painful to swallow; the voice is thick, and the throat feels rough and straitened. The heat of the surface rises in a most remarkable manner; not only to the sensations of the patient or observer does the heat seem greater, but the thermometer shows it to be 108° or 110°; that is more than ten degrees above the natural standard. There is sickness, headach, great restlessness, and delirium; the pulse is frequent, but feeble, and there is great languor and faintness. The tongue is of a bright red colour, especially at the sides and extremity, and the rising points are very conspicuous. The rash does not appear so early as in the milder scarlet fever, and is seen in patches, very frequently about the elbows. Sometimes it vanishes and appears again, at uncertain times, without any corresponding change in the general disorder. When the rash is slight, or goes off early, there is little scaling off of the skin; but in severer cases, large pieces of the skin come off, especially from the hands and feet. The swelling and inflammation of the throat sometimes go off without any ulceration; but, at other times, slight ulcerations form at the tonsils, and at the back of the mouth; and whitish specks are seen, intermixed with the redness, from which a tough phlegm is secreted, which clogs the throat, and is very troublesome. This kind of scarlet fever is not unfrequently followed by great debility, or the occurrence of other diseases, as inflammation of the eyes, or dropsy, or an inflammatory state of the whole system, or by water in the brain.

Treatment. It is in general proper to begin with giving an emetic, especially if we at all suspect the stomach to be loaded with undigested matter; and we are very soon after to exhibit laxative medicines, which are truly one of our most important remedies in this disease. A dangerous and exhausting looseness, which takes place towards the fatal termination of an ill-managed scarlet fever, for a long time excited great fears and prejudices against the use of laxative medicines in this disease; but better observation has convinced us, that so far from being detrimental, laxative medicines, early and prudently begun, have the best effect in mitigating the disease, and in preventing the collection of that putrid and offending matter in the bowels, which is so sure to produce wasting diarrhœa when it is suffered to accumulate. To lessen the burning heat of the skin, nothing is at all comparable to the free affusion of cold water, which, when employed prudently and at the proper time, cools the surface; and from a state of the most painful and restless irritation, brings the patient to comparative ease and tranquillity. It is in this disease that the powerful remedy of the cold affusion has maintained its ground, and though the experience of thirty years has amply confirmed the careful conclusions of Dr. Currie in most of the diseases to which he applied it, yet as it has certainly an appearance of harshness, and as equally good effects may be produced by other means, the cold affusion is now less insisted on; but in the true scarlet fever it should never be omitted, as its salutary effects are speedy and certain, and nothing else with which we are acquainted, is capable of affording such immediate relief. Nor is this to be considered merely as a temporary expedient; it has the best effect in shortening the disease; and in some cases where a long and tedious illness might have been expected, the cold affusion has seemed to put a very early period to it. If the timidity of practitioners or friends still refuses the cold affusion as too formidable, they must not object to the washing or spunging of the whole body with cold water, or vinegar and water; and till the heat of the body is reduced by these means, it is in vain that we give internal medicines to procure perspiration, or to allay restlessness and induce sleep. After washing, it is not at all unusual for the formerly harassed patient to fall into a gentle and refreshing sleep; and a mild and breathing sweat comes out over the whole body. This supersedes the necessity of sudorific and anodyne medicines; and provided we attend to the bowels, keep away stimulant and nourishing food, give the drink cold or acidulated, and employ proper gargles for the mouth and throat, the drugs we administer may be very few indeed.

The inflammatory state of the system which often follows scarlet fever, is not unfrequently accompanied with a swelling resembling dropsical swelling; but we are not to regard this last as a sign of debility, or to be deterred from the use of very active remedies. Bleeding to a considerable extent is necessary, both by leeches, and from the arm, if the patient be old enough; brisk purgatives are to be freely administered, and the inflammatory and dropsical tendency to be combated by the use of foxglove and other diuretics. When the inflammatory action has subsided, and the dropsy appears to be the principal malady, we are to give tonic medicines and nourishing diet, along with such medicines as increase the flow of urine. If there seems a determination to the head, our practice must be decided and active; bleeding and purging according to the urgency of the symptoms.

Malignant Scarlet Fever, *with Putrid Sore Throat.* There is yet another and more fatal form of scarlet fever, where the malignant and putrescent symptoms are more rapid and severe, where the general system is much oppressed, and the throat and neighbouring parts affected with rapidly spreading ulcerations. It is this which has obtained the name of

Putrid Sore Throat. This form of scarlet fever begins like the preceding, but in a day or two shows symptoms of peculiar severity. The rash is usually faint, and the whole skin soon assumes a dark or livid red colour. The heat is not so great nor so permanent as in the other kinds; the pulse is small, feeble, and irregular, there is delirium and coma, with occasional fretfulness and violence. The eyes are suffused with a dull redness, there is a dark red flush on the cheek, and the mouth is incrusted with a black or brown fur. The ulcers in the throat are covered with dark sloughs, and surrounded by a livid base; there is a large quantity of tough phlegm which impedes the breathing, occasioning a rattling noise, and increasing the pain and difficulty of swallowing. A sharp discharge comes from the nostrils, producing soreness, chops, and even blisters. There is severe diarrhœa, spots on the skin, bleedings from the mouth, bowels, or other parts, all of which portend a fatal termination to the disease. Sometimes the patients die suddenly about the third or fourth day; at other times in the second or third week; gangrene having probably arisen in the throat or some parts of the bowels. Those who recover have often long illnesses from the ulceration spreading from the throat to the neighbouring parts, occasioning suppuration of the glands, cough, and difficulty of breathing, with hectic fever.

Treatment. The active remedies formerly mentioned are quite inadmissible here. Unnecessary heat is to be avoided, but we are not to think of the cold washing or of purging, lest we oppress the powers of life and bring on a fatal diarrhœa. Gentle emetics are useful, as carrying off the acrid phlegm, which by getting into the bowels would occasion bad symptoms; and the throat must be often cleaned with very sharp and hot gargles. The infusion of Cayenne pepper, or the decoction of bark, acidulated with sulphuric or muriatic acid, or gargles to which a little tincture of myrrh or of camphor is added, may be usefully employed. When the debility is great, the patient is to be supported by the moderate use of wine and other cordials, with light nourishment. Bark is to be prescribed, but it is not likely to be useful when the face is flushed, the skin parched, and the tongue loaded.

There is an ulcerated sore throat of peculiar malignity, distinct from scarlet fever, which commonly terminates with the worst symptoms of croup; of this we have given an account at page 175.

Of Preventing the Infection of Scarlet Fever. As scarlet fever is one of the most contagious of diseases, it is highly necessary, where many individuals live together, as in families and schools, to make a separation between the infected and the sound, as soon as the disease appears. In numerous schools, such as are common in England, there should always be apartments in which children who are ill, especially of infectious disorders, should be kept. If a child, on the very first appearance of disease, be sent to the sick-room; if there be no unnecessary intercourse; if there be proper attention to ventilation and cleanliness; if the attendants be careful to wash their hands, and to be a little in the open air before they approach the rest of the family, there is every reason to hope that the infection will not spread. The proof of this may be found in the experience of medical men, who rarely, if ever, are transporters of contagious diseases. All alarm and agitation should be repressed; and even fumigation, as tending to excite apprehension, may be dispensed with, provided the utmost care be taken to produce a thorough ventilation through the house. The time is uncertain how long the disease may be communicated; it has been known to be given by a patient a fortnight after the rash had disappeared; and Dr. Bateman says there is little doubt, that so long as the least scaling of the skin continues, the contagion may be propagated.

SCIATICA, *or* HIP-GOUT. A painful rheumatic or gouty affection, chiefly confined to the hip-joint and lower extremities. The symptoms are chiefly the following: There is a pain and stiffness of the joint, preventing motion, and rendering it difficult to stand upon that limb; there is swelling and pain, often very distressing in the night; the limb, in bad cases, seems to shrink a little, and the muscles are wasted.

Treatment. When the pain is very severe, accompanied with general fever, it will be proper to apply leeches or the cupping-glass; to give cooling purgatives, and a diaphoretic draught. Friction is to be directed, with stimulant embrocations; or a blister is to be applied. The use of the Bath water has been found very beneficial in sciatica. The patient is directed to use the bath at the temperature of 105°, and to remain in it from fifteen to twenty-five minutes, and this repeated twice or thrice a-week. Sometimes water is pumped upon the part, without bathing.

SCIRRHUS. A hardening of the structure occurring in certain parts of the body, especially glands, which much deranges their functions, and which, passing on to inflammation and ulceration, gives rise in many instances to cancer. The removal, or rather the prevention of this is to be attempted as easily as possible, by general remedies, and by topical applications; taking care not to accelerate the inflammatory action. The principal remover of hardness and obstruction is mercury, but it requires to be administered with much caution in scirrhus. When scirrhous tumours can be safely removed from the body, it should be done.

SCLEROTIC COAT, the name of the tough and strong coat of the eye which contains the lens, the humours, and some of the finer and more delicate textures of that organ.

SCROFULA, KING'S EVIL, *or the* CREWELS, are different names for a tedious and multiform disease, of which one of the most characteristic marks is a tendency to a swelling of glandular parts, which, when they come on to inflammation and suppuration, discharge an unhealthy, curdy, mixed matter, and form ulcers very difficult to heal.

Of the SCROFULOUS CONSTITUTION. This tendency to glandular swelling is the mark of a peculiar constitution, derived from parents or ancestors; and in such constitutions, the diseases and accidents that happen with comparatively little inconvenience to others, are productive of very troublesome and alarming consequences to them. A child of a healthy constitution may have small-pox or measles severely enough, but they will run their course, and leave no trace behind them; whereas, in a scrofulous child, the same diseases very frequently prove the commencement of permanent and incurable ulcers, runnings, ophthalmia, deafness, debility, consumption, and a long train of other ailments. Scrofula does not always show itself very early in life, nor is there always present any unhealthy peculiarity of look which readily discovers itself; on the contrary, many a plump thriving child needs but the irritation of teething, or an attack of cold or sore throat to bring into action this destructive malady; and many persons of apparent high health and delicate beauty, when they reach a certain age, or are exposed to certain accidents, as cold or damp, or over-exertion, give fatal proof of having carried in them the seeds of this troublesome disease. Scrofulous persons, though frequently very beautiful, are seldom robust or able to endure much fatigue.

Of the Subjects of SCROFULA. The children most commonly attacked, are those of a soft fine skin, fair hair, and delicate complexion; but it is sometimes seen in those of a darker temperament. Children having a tendency to rickets, as marked by a large belly, large joints, and prominent forehead, very frequently show the scrofulous habit. Those who live in damp, uncomfortable dwellings,

exposed to many privations, who are badly clothed, who live on scanty and unwholesome food, deprived of exercise in the open air, and who are inattentive to cleanliness, are those who are most subject to the disease. The countries where scrofula is most prevalent, are those of a moist atmosphere, where the seasons are variable, and the weather unsteady. Such seasons and weather, cold and humid for a considerable time, often prove the occasion of an attack of scrofula. Scrofula occurs very generally in this country; indeed some go so far as to say, that few persons are perfectly exempt from it, although it is only those individuals that show severe symptoms of it, that get the appellation of scrofulous.

Of the Prevention of SCROFULA. Scrofula is one of the diseases that are manifestly hereditary; and families that are scrofulous, ought to be particularly careful as to the way in which they bring up their children. Since the malady is not always in active operation, it becomes a matter of great importance to know whether it can be kept from appearing and committing its destructive ravages, whether any management in early life, or in more advanced years, will protect the lively child or the beautiful youth from the dangerous enemy which has attacked their fellows, and whether an early and assiduous care may not counteract the hereditary constitution of scrofulous families. Long and anxious inquiries have satisfied medical men, that scrofula is a disease of debility; and that while every thing is to be avoided which has a tendency to over-stimulate and inflame the system, such diet and regimen are to be adopted, as have the tendency to strengthen and invigorate it. Children who show any predisposition to scrofula, should be brought up on plain, but nourishing and easily digestible food; such as good broth, with a moderate allowance of solid meat; but pastry, heavy puddings, and the like, should be avoided. They should get a little wine every day at times, but it should be interrupted occasionally, that they may be taught to consider it strictly as a medicine, and not acquire a liking for it. Their clothing should be warm, and they should be much in the open air when the weather is temperate and dry; and in the proper season, they should use the cold bath, or sea-bathing.

Symptoms of SCROFULA. Having made those introductory remarks, we proceed to give some account of the general appearances and treatment of scrofula. The disease generally first shows itself between the third and seventh year of a child's age; but it may arise at any period before the age of puberty, after which, it rarely makes its first appearance, at least externally.

The attacks of scrofula usually begin some time in winter or spring, and get better, or disappear in summer or autumn. The first appearance of the disorder is the occurrence of small round tumours under the skin of the neck, about the ear, or below the chin, without any pain or discolouring. In some cases, the joints of the elbows or ankles are the parts first affected. In this case, the swellings surround the whole joint, and impede its motion. After some time, the tumours acquire a larger size, the skin which covers them becomes more purple and livid; and they inflame, suppurate, and break into little holes, from which a mixed pus-like fluid, intermixed with curdy-looking matter, at first proceeds, which soon changes into a thin serous discharge. These ulcers spread unequally in various directions; some of them heal, but other tumours form, followed by other ulcers. In this way, the disease continues a number of years, and at last the ulcers heal up, leaving behind them very disagreeable scars. In some scrofulous habits, the eyes and eye-lids are the principal seat of the disease, shown by the incessant inflammation of the ball, and the raw and painful state of the eye-lids. The bones of scrofulous persons are liable to disease, namely to partial or general enlargement, to inflammation,

suppuration and exfoliation. Diseased spine is also much connected with a scrofulous constitution. Many internal parts are subject to disease in scrofulous habits. The glands of the mesentery, through which the fluid destined for the nourishment of the body has to pass, become obstructed, inflamed, or suppurated; the consequence of which is, a swelling of the belly, while the rest of the body is wasting; hectic fever, disordered bowels, and gradual decay. The lungs of scrofulous persons have, almost universally, tubercles or little knots in them, which inflame and suppurate, and are the commencement of fatal consumption. Water in the head, which so often carries off many children of a family, is believed to be connected with a scrofulous taint. Scrofula does not spread by contagion; however obstinate scrofulous sores may be, the matter discharged from them is by no means acrid, nor does it infect other persons, or other parts of the same body when applied to them.

Treatment. Our first consideration shall be directed to the management of the tumours which appear externally. It is certainly proper, as far as we can, to prevent their coming to a suppuration; and for this purpose, we are to endeavour to promote their dispersion by the prudent use of gentle friction, aided by proper diet and regimen, with occasional purgatives; taking care to avoid all exposure to cold and moisture, and to keep the swelled parts covered with flannel or warm clothing. When we find our attempts to promote resolution of the tumours to be unavailing, we must apply emollient poultices; and at the same time give nourishing diet to invigorate the system, and bring on a kindly suppuration. It becomes a matter of importance, how to treat the abscesses when matter is formed; whether to let them break, or to open them with the lancet. Whichever way they be opened, there is a probability of a long continued discharge; and the surgeon should state to the friends of the patient, that by allowing the matter to be discharged by a lancet, he has it in his power to make a small and effectual opening; whereas the matter, if the swelling be left to itself, will perhaps break out in several different places; and nothing be gained with respect to the continuance of the after-discharge, or the prevention of unseemly scars. When the ulcers remain open and spread, a variety of applications will be necessary. Sometimes a stimulant dressing is required, as ointment of verdigris, or basilicon; at other times, simple dressing, as lard, or cerate, is all that can be borne. Sometimes a degree of inflammation will suggest the propriety of a poultice, but this must not be continued long, lest we induce a relaxation of the parts around. We must vary our treatment also by the application of different washes, astringent or cooling, as sulphate of zinc, or sugar of lead. Sea-water sometimes is of service. But under every treatment, scrofulous ulcers disappoint our hopes, and continue open for a tedious time; and, at length, in many cases, without any perceptible cause, they suddenly put on a healthy action, and heal up, not to break out any more.

The constitutional treatment during this period, should be as healthful and invigorating as possible; good diet, air, and exercise are necessary; a residence in the country, or sea-bathing, are useful auxiliaries. Some practitioners have spoken with great commendation of the warm bath for scrofulous patients. It is to be persevered in for a considerable time. With respect to medicines given internally for the cure of scrofula, the list is long, and therefore unsatisfactory. One drug after another has been tried, and found not to answer. Among others, iodine, muriate of lime, and the preparations of iron have been tried, and have been found as beneficial as any thing else. In some cases, it may be advisable to open an issue in some other part of the body, at a distance from the ulcers or glands which we fear may come to suppuration. It will be

seen, that in the foregoing account of the symptoms and treatment of scrofula, we have confined ourselves to the external form of it, principally shown by the ulcerations and swellings of parts within our sight; but there are many internal diseases which occur in scrofulous habits. *See* MARASMUS, HEAD, *Water in*; CONSUMPTION, &c.

SCROTUM. The bag containing the testicles. It is liable to be distended with water, forming the disease termed hydrocele. The scrotum is subject to a troublesome *prurigo*, for which friction with mercurial ointment is the best application. Chimney-sweepers are sometimes afflicted with a cancerous sore of the scrotum, from soot lodging in its folds. Mercurial applications do harm; and there is no way of preventing a painful and fatal illness, but extirpating the diseased portion.

SCURF. A term rather vaguely used for any dry thin scale on the surface; but properly signifying small exfoliations of the cuticle, which occur after slight inflammation of the skin, a new cuticle being formed underneath during the exfoliation. The best application for what is commonly called scurf, or dandriff, is the zinc ointment, or the citrine ointment much diluted; washing off the grease occasionally with a little soft soap, or a solution of the carbonate of soda.

SCURVY. This also is a term which has been very generally misapplied, both in popular discourse and in the writings of medical authors. By such inaccuracies, it has been used to signify a great number of very dissimilar disorders of the skin; and indeed it became quite general to give the name of *scurvy* to any eruption, or long continuing scaliness, for which there was no appropriate name at hand. By medical writers, and by the well-informed non-professional man, the term scurvy is now applied to that disease which is produced by a long abstinence from fresh vegetable food, and which is therefore frequently observed in long voyages, and in besieged towns.

Symptoms. It comes on gradually, with heaviness and aversion to motion, with dejection of spirits, anxiety, and great debility. The countenance becomes sallow and bloated, the breathing is easily hurried, the teeth become loose, the gums are spongy, and bleed when slightly touched; and livid spots appear on different parts of the body. A very curious circumstance sometimes occurs in scurvy, old wounds which have been long healed, break out afresh; in Anson's ship, about 1740, a wound broke out in one of his marines, which he had received at the battle of the Boyne, fifty years before. If the disease is not checked, the joints become swelled and stiff, the tendons of the legs are stiff and contracted; blood issues from the nose, the ears, the anus, and other parts; fetid stools are discharged, and the patient dies with symptoms of diarrhœa or dysentery.

Causes. The great predisposing cause which, when long continued, needs no other to excite the disease, is the being prevented from having a due admixture of vegetable food with the diet; hence its frequent occurrence in long voyages, where the people are compelled to live much on salt provisions, and in besieged towns, where the provisions are scanty and bad; and in cold, damp, and poor situations, where human life is with difficulty supported. Among other very powerful exciting causes, we are to reckon want of cleanliness and ventilation, a damp and cold atmosphere, and above all, depressing passions. On the large scale of observation afforded in fleets and armies, it is invariably found, that whenever any thing occurs to damp the spirits of the men, the scurvy uniformly becomes worse; whereas any thing that tends to increase their alacrity, has as conspicuous an effect in rendering it milder and less frequent.

Prevention of SEA-SCURVY. The destructive ravages of the scurvy in fleets and armies render it an object of attention to the statesman and commander as well as to the physician; and it has been

very properly remarked, that all the improvements in navigation and nautical astronomy, by which a ship can keep the sea for so long a period, would have been utterly useless, had there not been found out some method of preserving the health of seamen during those long voyages. Happily it has at length been ascertained, that by taking to sea a proper supply of lime or lemon-juice, and distributing to the ship's company a portion of it every day, when their fresh provisions begin to fail, they may be kept from scurvy, as effectually as any number of persons living on shore, and using fresh vegetables every day. This has for a considerable number of years been ascertained on a very extensive scale of experience. During the long voyages of Captain Cooke, he kept his men quite free from scurvy. In the numerous and extensive armaments which were made during the wars of the French Revolution, and in the long voyages to India and China, it was only in ships where the supply of lime-juice was neglected, that any symptoms of the scurvy appeared. From one to two ounces a-day are a sufficient quantity for this salutary purpose; and they may be given diluted with water, or mixed with the grog, so as to form a healthful and refreshing beverage. When in any individuals, the tendency to scurvy appears stronger than in others, as indicated by the spungy and easy-bleeding gums, by stiffness of the ham-string, by laziness and dejection of spirits, it will be proper to give an ounce, three or four times a-day, till the tendency is diminished. Lime-juice is apt to ferment and not to keep properly, owing to the quantity of pulp and mucilage squeezed out along with it; to prevent this it is proper to mix with it a little alcohol or carbonate of lime.

Cure of Scurvy. Having said this much respecting the prevention of scurvy, we now proceed to say something concerning its cure. And happily, so far as our experience goes, the same powerful yet simple agent which prevents scurvy, is also fully able to cure it. When circumstances admit of it, and we are able to procure for a ship's company an abundant supply of fresh meat and vegetables, this is the natural and appropriate remedy; but in the last stages of the disease, when the debility is great, it is a matter of much danger to take the sick on shore, as they not unfrequently die in the boat that carries them thither; and instances have even occurred of the land-air being too oppressive for the lungs of those, who did not previously show marks of so great feebleness. It is by far the safest way to attempt the cure of the men on board their ships; and when the disease abates a little, and the strength is beginning to return, it may then be accelerated by a removal on shore, and by the usual diet and exercise to be found there. Many auxiliary circumstances are to be called into action, both in the cure and prevention of scurvy; the greatest attention to ventilation and cleanliness, frequent washing of the ship in fine weather, fumigation between decks by the vapours of the nitric or muriatic acid; attention to increase the real comfort of the men, and to check all intemperance; to promote regularity of discipline and cheerfulness of mind. Various articles are to be used in diet which counteract the pernicious tendency of a long continued use of salt provisions, as spruce, or treacle-beer, preparations of groats or oatmeal occasionally, parboiled vegetables and the like. But it is obvious, that the expense and trouble of all these expedients must, in some measure, hinder their universal adoption; it is satisfactory, therefore, to think, that in the pleasant fruits of the tropical climates, we have a safe, an effectual, and a portable remedy, easily applied, and easily provided, by every navigator.

It is unnecessary to enumerate all the vegetables to be used for the cure or prevention of scurvy. Water-cresses, radishes, scurvy-grass, lettuces, and the like, which may be eaten raw; or cabbage, turnips, spinage, cauliflowers, boiled; o.

ripe fruits, as oranges, pumpkins, pine-apples, plantanes, when they come in the way, as they not unfrequently do in the long voyages to the Indian and Pacific oceans. It is indeed a grateful vicissitude, when a crew, long exposed to dead calms and burning skies, with scanty allowance of water, and with their fresh provisions expended, arrive in China, where abundance of fresh provisions, and a profusion of oranges and other fruits, accessible to every person on board, soon remove the spungy gums, the stiffened sinews, and the unhealthy look with which they reached their desired haven.

SCURVY-SPOTS. This is a term popularly applied to those scaly spots which appear in different parts of the body; a large proportion of the surface being free from any disease. They sometimes are troublesome for a long time, and are with difficulty removed by any medicine or external application. These scurvy-spots are what medical men now designate by the name of *lepra*, and a particular description of them has been given under that article. The term seems also frequently applied to the scaly tetter and some varieties of the fish-skin disease.

The best remedies for scurvy-spots, when they are thinly scattered and not in a state of active inflammation, or inclined to discharge matter, are washes slightly stimulant, as sulphate of zinc in rose-water, or solution of muriate of ammonia; or ointments of red precipitate, half a drachm to the ounce of lard; or the diluted citrine ointment, gradually using it of the full strength. These are to be applied night and morning, and the greasy matter to be occasionally washed off with a little soap and water. The more extensive and formidable kind of spots will require general as well as local applications, the warm bath, rubbing with various ointments of which some of the preparations of mercury are ingredients; accompanied by the use of Harrowgate, Leamington, or other mineral waters; the warm sea-water bath; attention being paid to the state of the stomach and bowels, and of the health in general.

SEA-AIR. The air upon the sea and in its neighbourhood is generally distinguished by its greater coldness, purity, and sharpness; and is therefore in many cases directed to patients, whose complaints do not hurt their respiration, and who have vigour of constitution enough to derive benefit from the stimulus which such air occasions. A residence by the sea-side is beneficial to persons of a scrofulous and debilitated constitution, provided they take care not to expose themselves to cold and damp; and in the fine season, when there is no reason against it, they ought to bathe. In complaints of the chest, the use of bathing, and a residence near the sea is more questionable; and we rather recommend an inland rural situation. A sea-voyage has long been famous for its good effects at the commencement of consumptive complaints; and these good effects may be ascribed partly to the good air at sea, partly to the affection of the stomach and skin induced by sea-sickness.

SEA-WATER is principally a solution of muriate of soda, with a small portion of muriate of magnesia, muriate of lime, and sulphate of soda. Its effects on the body, when taken internally, are of a purgative nature; but it is seldom prescribed, as we have many purgatives more agreeable and effectual. As a cathartic, a pint is the usual quantity, which should be taken in the morning, at two doses, with an interval of half an hour between each. *See* BATHING, for its effects when applied to the surface.

SECONDARY FEVER. The fever which takes place in small-pox about the eleventh day, when the matter in the pustules is beginning to thicken, and to be absorbed into the system. It is rather unfavourable, when this secondary fever is violent.

SECRETION. The process by which certain organs of the body secrete or separate from the mass of blood, certain fluids which are to be of use in the ani-

mal body, or which require to be thrown out of it. The nature of this process is quite unknown. The secreted fluids cannot be detected in the blood. Passions of the mind, and diseases, have much influence on the *secretions*.

The term secretion is also applied to the fluids separated; thus, the tears, the wax of the ears, the bile, the urine, and various other fluids separated from the blood by their appropriate organs, are called *secretions*.

SECUNDINES. The after-birth and membranes, which are usually thrown off after the fœtus. *See* After-birth.

SEDATIVES. Medicines which have the power of allaying action in general, or of lessening the exercise of some particular function. It has been a matter of keen controversy among speculative writers, whether there be really any sedative medicine; it being contended, that medicines which apparently have that effect, are in reality stimulants, and that it is only the debility remaining after the preceding excitement, that gives them the appearance of having acted as sedatives. Whatever may be the correct philosophical explanation, we have some substances with which we can allay inordinate action, and can produce a sedative effect. Under Narcotics and Opium, we have given an account of the most powerful of these, on which we can chiefly depend; and under Foxglove will be found the remarkable effects produced by that powerful plant, which, at one time, was believed by many medical men to be possessed of an undoubted direct sedative effect.

SEDATIVE SALT *of* Homberg, a name for borax. *See* Borax.

SEDIMENT. Any substance heavy enough to fall to the bottom of a fluid in which it has been suspended, or with which it has been mixed. The principal sediment to which we pay attention in the practice of physic, is that in the urine; which, in certain diseases gives some indication of what is going on in the system. A thick sediment like brick-dust, indicates fevers and inflammatory action. In fits of stone, or where there is a tendency to gravelish complaints, the sediment of the urine is chiefly uric acid.

SEIDLITZ WATER. A saline mineral water, having a strong impregnation of sulphate of magnesia, with a small quantity of muriate of magnesia; hence its bitter taste and purgative qualities. It is recommended in complaints attended with indigestion, in hypochondriasis, in suppressed menses, and in the complaints incident to women at the time of life.

Patent Seidlitz Powders. "These consist of two different powders; the one, contained in a white paper, consists of two drachms of tartarized soda, and two scruples of carbonate of soda; that in the blue paper, of thirty-five grains of tartaric acid. The contents of the white paper are to be dissolved in half a pint of spring water, to which those of the blue paper are to be added; the draught is to be taken in a state of effervescence. The acid being in excess renders it more grateful, and no less efficacious as a purgative. This preparation cannot be said to bear any other resemblance to the mineral water of Seidlitz, than in being purgative." *(Dr.* Paris's *Pharmacologia.)*

SELTZER WATER. A water slightly alkaline, highly acidulated with carbonic acid. It is thought to remove many of the symptoms of hectic fever, eruptions of the skin, disorders of digestion, acidity and heartburn, and spasmodic pains of the bowels. It is much recommended in diseases of the urinary organs, especially those in which gravel is formed. The dose is from half a pint to a pint.

SEMOLINA. The farina obtained from a certain Russian grain, which, boiled with water to the consistence of thin porridge, makes an excellent article of diet for children and for invalids. It may have the addition of sugar, and milk or wine, according to circumstances. It is also called Manna Croup. *See* Manna Croup.

SENNA. The leaves of the *Cassia Senna*, which grows in Upper Egypt, are brought to Alexandria, whence the European market is supplied with them, but they are frequently adulterated with the leaves of other plants. It is difficult, says Mr. Brande, to describe the characters which should guide us in the selection and purchase of senna; among them we may enumerate a bright fresh colour, and an agreeable smell, somewhat resembling that of green tea. It should not be too largely mixed with stalks, seed-pods, and other extraneous matter, nor very much broken, nor very dusty. Senna is a very useful purgative, which operates mildly, but effectually. Its principal inconvenience is, that it is apt to gripe pretty severely; but this may in general be corrected by the addition of ginger, cinnamon, cardamoms, or any such warm aromatic. Senna is most conveniently given in the form of infusion, which is generally made by pouring about six ounces of boiling water, on three or four drachms of senna-leaves, or more, according to the strength we want; and letting it stand an hour: a common tea-pot will do very well for this infusion. A cupful or more of this, sweetened with sugar, may be given even to children. A dessert-spoonful of tamarinds added to the leaves before infusion, adds both to the elegance and efficacy of the infusion. The boiling of senna lessens its purgative virtues; and the tincture cannot be taken in sufficient quantity to purge, on account of the spirit.

SENSATION is the function by which we obtain information of the nature and properties of external objects, and of the state of our own organs. When any impression is made on the organs of the senses, that impression is conveyed by the nerves to the brain, or *sensorium commune*. To produce sensation, a certain force of impression is necessary, corresponding to the sensibility of the organ on which it is made. If the impression be too weak, no sensation follows; if it be too strong, it produces either pain or an indistinct idea. Sensations also depend on the previous state of the organs. Thus the very same water will convey different sensations to the two hands, if one of them has previously been kept in warmer, and the other in colder water. Some duration of the impression is also necessary to convey a distinct sensation. When the same impression is frequently repeated, the sensation produced is less lively; and the impression must be increased in quantity or intensity, to produce the same sensation. Hence spirituous liquors and opium produce less vivid sensations when a person has got the habit of using them; and hence, to produce the same sensation, he goes on increasing their quantity to the certain ruin of his health.

Various derangements of the bodily structure, or irritating or distending substances, occasion certain sensations in us, by which we are warned to take measures for our own relief, or for the restoration of the healthy state. Under this we include pain from spasm, inflammation, or obstruction; and the sensations by which we are excited to the usua evacuations.

SENSIBILITY, in medical language, means the capability of receiving impressions and conveying sensations to the brain. In health, almost every part of the body is sensible, except the hair, the outer skin, and the nails; but in certain states of disease, parts which were formerly devoid of feeling, become exquisitely sensible; such is found to be the case with the bones, and the cartilages.

SETON. An issue which is made by introducing through a portion of the skin and cellular substance, a skein of silk or cotton, by which a constant irritation is kept up, and matter discharged. It is employed in the various cases where issues or drains are thought useful, as in the neck, when there is threatening of apoplexy; or the side, when the liver is diseased. A seton is introduced by means of a broad needle made for the purpose; the silk should not be moved for a few days after the operation, when

it will be found loosened by the suppuration.

SHARE-BONE. The bone at the lower part of the belly, forming the anterior boundary of the pelvis or bason. Behind and above it lies the urinary bladder. It has been absurdly proposed to divide the juncture of the share-bones in cases of difficult labour; but a very little reflection on the plan by those who understand the subject, and know how little space would be gained by any practicable enlargement there, will satisfy them, that it never should have been thought of.

SHELL-FISH have been considered by some as very nutritive and easily digestible; but these good properties have been assigned to them without sufficient reasons. The principal shell-fish used in this country are oysters, lobsters, crabs, shrimps, and mussels. Some of them occasionally produce eruptions on the skin, and even worse effects. *See* OYSTERS *and* FISH-POISONS.

SHERRY WINE comes from Xeres in Spain. When of a due age and good condition, it is a very fine and wholesome wine, free from any excess of acid matter, and possessing a dry aromatic flavour and fragrancy, which renders it a fit stimulant for delicate stomachs, and therefore a valuable medicine.

SHINGLES. A disease characterised by a number of vesicles, most commonly round the waist, like half a sash; but sometimes like a sword-belt across the shoulder. It very rarely surrounds the body completely; hence a popular, but groundless apprehension, that if the disease goes round, it will be fatal. The disease is usually preceded, for two or three days, by languor and loss of appetite, rigors, headach, sickness, and a frequent pulse; with a heat and tingling in the skin, and shooting pains through the chest, and at the pit of the stomach. After these symptoms, more or less severe, there appear, on some part of the trunk, red patches of an irregular form, at a little distance from each other; upon each of which numerous small elevations appear, clustered together. In the course of twenty-four hours, they enlarge to the size of small pearls, and are filled with a limpid fluid. The clusters are surrounded by a narrow red margin. During three or four days, other clusters continue to rise in succession, and with considerable regularity. About the fourth day, the vesicles acquire a milky or yellowish hue, which is soon followed by a bluish or livid colour of the bases of the vesicles, and of the contained fluid. Several of them run together; and those which are broken, discharge a small quantity of a serous fluid for three or four days; this concretes into thin dark scabs, which soon become hard, and fall off about the twelfth or fourteenth day. Where there has been considerable discharge, numerous pits are left. The feverish symptoms commonly subside when the eruption is completed; but sometimes continue much longer, probably from the itching and smarting of the vesicles. Though resembling some other eruptive diseases, in its rise and decline, it is not contagious, and persons may have it more than once. The disease, in general, is slight and free from danger.

Causes. It chiefly attacks young persons. It is most frequent in the summer and autumn, and arises not unfrequently from exposure to cold after violent exercise. It has come on after bowel complaints, and after the pains of the chest following acute affections of the lungs.

Treatment. It does not require severe or active treatment. Gentle laxatives and diaphoretics with anodynes when the deep-seated pains are severe, and a light diet, contain all that is requisite in the cure. A little simple ointment is to be applied to the ulcerated surfaces, to prevent their being injured by the clothes rubbing or sticking in to them.

SHIVERINGS, or *Rigors* as they are called in medical works, are a very frequent symptom of suppuration having begun, in the course of some inflammatory disease. They are a very common fore-

runner of feverish diseases. They occur during the progress of labour in many women, and also after delivery. Shiverings are not a very bad symptom in labour; and when they occur after delivery, they are to be relieved by a little brandy and warm water, or forty drops of laudanum, with the application of warm flannel to the pit of the stomach, and to the feet, and putting on additional bedclothes. When a woman, from former experience, has reason to expect shiverings, they are to be prevented by giving proper cordials, as a little camphor julep, or a little wine and water, immediately after the birth of the infant.

SHOWER BATH. *See* BATH, p. 60.

SIALAGOGUE. A medicine which has the power of increasing the flow of the saliva. This may be accomplished by chewing various acrid substances, as ginger, pellitory, &c., which, by stimulating the termination of the ducts, excite the glands to the production and throwing out of more saliva; but the principal sialagogue is to be found in mercury and its preparations, which, taken into the stomach, or introduced into the system by inunction, act on the salivary glands, with peculiar energy, and cause the excretion of a very great quantity of saliva. *See* MERCURY *and* SALIVATION.

SIBBENS *or* SIVVENS. A disease of which the first appearances are superficial ulcerations on the tonsils and uvula, with an aphthous eruption in the inside of the mouth, cheeks, and lips. Sometimes a hoarseness attends, and excrescences like a raspberry arise from them. Soon after the affection of the mouth, small pustules arise on the skin, which break and leave behind them a dry crust, beneath which, ulcers form, which corrode pretty deep. Sometimes, collections of matter, like boils, appear in different parts, which degenerate into sores of a superficial kind, discharging a thin acrid secretion. These are soon filled up with fungous excrescences, which shoot up in the form of a raspberry.

It occurred at one time very much on the west coast of Scotland, and was supposed to be owing to infection received by drinking from the same cup as an infected person, smoking from the same pipe, or handling the sores of such as labour under it. It is supposed to be syphilitic in its nature, and to partake of the character of yaws, a disease common in Africa and the West Indies. It is to be treated by diaphoretic medicines, with warm bathing; and when the eruption begins to dry off, it will be necessary to put the patient under a gentle course of mercury, and interpose occasionally some mild purgative.

SICK HEADACH. A very painful and distressing illness, generally the consequence of disordered stomach from an excess in drinking the day before. The pain is severe, the depression of spirits great, the skin hot and dry, and symptoms of bad digestion, heartburn, flatulence, and putrid belchings occur. The treatment consists in procuring a free discharge of the crudities contained in the stomach and first passages; with one or two copious evacuations from the bowels. Emetics are not very proper; and it is safer to trust to purgative medicines; of which, calomel or the blue pill should be one of those first employed. Two or four grains of calomel, or a blue pill, followed by a drachm of the compound powder of jalap, or an ounce of Epsom or Rochelle salts four hours afterwards, will give much relief, though not instantaneously; as the stomach and the sympathizing brain will require some time to recover their former state. Two drachms of the tincture of colombo in a glass of cold water, or three grains of the sulphate of quinine in a like quantity of cold water, with ten drops of elixir of vitriol, taken the following day, will be of service.

SICKNESS. The uneasy sensations experienced in different parts of the body, when the stomach is disordered, and inclined to throw up its contents. This arises from a very great variety of causes,

some of which proceed from the state of the stomach itself, or from substances put into it, or from sympathy with other diseased parts; it occurs very often after the commencement of feverish disorders. Certain motions of the body, as swinging, sailing, &c., occasion sickness. In complaints of the lungs, sickness is a very common attendant.

Sickness is to be relieved according to the cause of it, so far as it can be discovered. An emetic is to be given, if we know it to arise from acrid or indigestible matter in the stomach; if it is a symptom of other diseases, the primary disease is to be attended to; and in feverish complaints, and the beginning of eruptive diseases, as small-pox, measles, &c., it commonly goes off when the eruption comes out, which event may be sometimes a little accelerated by bathing the whole body, or the feet and legs only. When there is no fever or costiveness, a small dose of laudanum, as twenty-five or thirty drops, or half a grain of opium may be of use. The effervescing draughts are also good. When headach and sickness occur, a dose of calomel, followed by a purge of Epsom salts, is to be administered. For sea-sickness we know of no remedy, but it goes off as a person gets habituated to the motion of the ship.

SICKNESS *in Infants.* This occasions very alarming appearances. The countenance changes, the limbs are relaxed, the child seems low and torpid, and the breathing is oppressed. There are sometimes slight efforts to vomit. Sickness in infants is occasioned chiefly by the presence of some indigestible substance in the stomach, or by an alteration in the qualities of the milk. Violent emotions of the mind in the nurse, or her being out of order, produce a morbid change in the milk. Children are also very often sick during teething. When we see sickness in the child, we are to relieve it by an emetic of ipecacuan, which is by far the safest we can employ. The powder may be given to infants under five weeks, in the dose of three or four grains; and after that period, the ipecacuan wine, in doses of a tea-spoonful or two may be given. Tartar emetic, and antimony in all its forms are very hazardous for children and infants.

SIDMOUTH. A village on the coast of Devonshire, a favourite place of resort for consumptive and other invalids. It is situated between two romantic hills at the mouth of the little river Sid, at the bottom of an immense bay between Exmouth and Lyme Regis. It is well sheltered from the east; and towards the north are several hills which shut it in that direction. The climate is very mild. Till Christmas, nothing like winter is felt; and even after that date, the weather is never very severe. Myrtles flourish all the year in the open air; and evergreens of all sorts attain great luxuriance. There is occasional dampness of the atmosphere, but without cold; this warm moisture is soothing and relaxing. Although patients labouring under pulmonary complaints have got well by a residence at Sidmouth, the disease is not unknown among the natives. Relatively to the stranger, the climate may have been a warm one; though the native, to obtain the same advantage, would have required a removal still farther south. The diseases to be benefited by a residence at Sidmouth are those of a chronic inflammatory nature, nervous and stomach complaints accompanied with dry skin; and cases of difficult menstruation. But catarrhs with copious expectoration, and the relaxed state of the female constitution, with considerable debility, are not so likely to derive advantage from the air and climate of Sidmouth.

SIGHT. There are various depravations of this sense, some of which may be benefited by skilful treatment, others are without remedy. Some persons are incapable of distinguishing certain colours; others see objects of a different colour from what they really are. Sometimes this last defect may be owing to the improper light in which things are

seen, at other times to certain fluids effused in the eye, as bile in jaundice, or the milky fluid in cataract, or when blood is effused either by external violence or by some inward disease. Some very formidable irregularities or deficiencies of sight, arise from disorders of the stomach or abdominal viscera, and are cured by evacuations, by tonics, or by anodynes. Other causes may give rise to these defects, as passions of the mind, terror, delirium, and the like. In the decline of life, vision becomes impaired, from the deficiency of the humours, and is to be remedied by the use of convex glasses; or if the eye is too prominent, glasses of a different form must be used. *See* SPECTACLES.

SILVER. This metal, dissolved in nitric acid, becomes oxidated, and combined with the acid, forming lunar caustic, an active corroding substance, of considerable importance in surgery as an escharotic. It is also occasionally given internally for the cure of epilepsy, in doses of the eighth of a grain. *See* NITRATE *of Silver*.

SINAPISMS, mustard poultices applied to any part of the body. They are employed with the same intention as the common blister, to produce a counter-irritation; and they often give relief very speedily in internal pains. They act much more quickly than blisters; and except when they have been too long on, or when they are put on very irritable skins, they are free from the inconvenience of any sore following. Sinapisms are made by taking a portion of the flour of mustard, such as is used for the table, mixing it with water and a little of the crumb of bread, and applying it on the part by means of linen or muslin, till a smarting or burning sensation arises, which will generally be in about fifteen or twenty minutes. Sinapisms are often applied to the soles of the feet, to remove the drowsiness and delirium which happen in various diseases, and especially towards the end of fevers. As auxiliaries, they may be of considerable service when united with other means; and sometimes seem to revive the functions of the brain, when they are apparently suspended.

SINUS. In surgery, a long hollow narrow track leading from some abscess or diseased bone, by which matter continues to be discharged externally. In anatomy, *sinus* means a hollow part of a bone, or sometimes a cavity in a soft part, as about the heart or great vessels.

SKIN. The outer covering of the body, of various texture and thickness in different parts, according to their functions and uses. It is composed of the cuticle or scarf-skin, which constantly decays and is renewed; the second layer is called the rete mucosum, and underneath this is the true skin. In the rete mucosum is situated the colouring matter which determines the race, as the negro, the copper-coloured, &c. The skin varies in thickness according to the part on which it is spread, and the uses to which that part is destined; from the thin transparent covering of the lips, to the hard and horny covering of the labourer's hands, and the soles of the feet. The skin is one of the great outlets by which the matter which is no longer wanted, is discharged from the body. This is done by insensible perspiration. The quantity of fluid discharged in this way is of considerable amount in the twenty-four hours, but cannot be accurately calculated. When this is checked, the burden of freeing the system from the excrementitious matter is thrown upon the lungs, the kidneys, or the digestive organs. Hence a very important part of the treatment of dyspeptic patients consists in regulating the discharge by the skin; and long continued indigestion imparts to the countenance a peculiar unhealthy appearance.

Diseases of the SKIN. The skin is of a very complex and delicate structure; countless millions of nerves terminate there, blood-vessels are sent to it, it is pierced by exhalant pores, and absorbents take their rise from it. From these

circumstances, it is subject to a great variety of diseases; at least is the seat of many, which not only affect the skin itself, but being generated in the system either by the influence of contagion or morbid action, manifest their principal violence on the skin. Of late years, much attention has been paid to observing, classifying, and naming the various diseases of the skin; by which means, we are enabled to distinguish them with more accuracy, and to apply with more certainty the proper means of cure. While all eruptions, of whatever kind, were ranked under the common name of *scurvy*, and one or two remedies were thought to be good against scurvy, these remedies would be often used in cases to which they were quite inapplicable, and where they would of course disappoint the hopes confided in them. *See* ERUPTIONS.

SKIN-BOUND *or* HIDE-BOUND DISEASE, a malady which principally affects children, and has been observed in some of the large hospitals of London and Paris. There are two kinds, the acute and chronic; the acute generally appears soon after birth, and proves fatal in a few days. In hospitals, several children were attacked at the same time, particularly those who had been much weakened by bowel complaints, and whose stools were of the consistence of clay. The skin was of a yellowish white colour, like wax, and was hard and resisting to the touch. It seemed fixed to the subjacent flesh, and would not slide upon it, nor could it be pinched up like healthy skin. The child was cold, made a moaning noise, and was apparently just dying. In the French hospitals, the disease was frequently attended by erysipelatous symptoms. The more chronic form of the skin-bound disease is described by Mr. Burns, as affecting children of a delicate habit. The skin, from birth, was not so pliable as usual, and was most rigid about the mouth. The skin gradually becomes tight, hard, and shining, and of a colour a little inclined to yellow. The scalp is often bald and shining, and the veins of the head very large and distinct. The appetite, at first, is not greatly impaired, and the bowels are sometimes pretty regular. The child soon becomes dull and listless, moans often, and gradually sinks, or is carried off by fits. The complaint lasts for several weeks.

Treatment. There is no treatment known on which we can depend. Mercury, laxatives, the warm bath, and emollient frictions, have all been tried in vain. Calomel powders have sometimes appeared to do good; and the most likely means are the warm bath, and medicines which promote perspiration.

SKULL. The skull or *cranium*, as anatomists term it, is the vaulted bony cavity which lodges and defends the brain, and its prolongations; with their membranes, vessels, and nerves. Its shape is determined by the soft parts within, and by the action of the muscles which are situated at its sides. It is composed of eight bones, six of which are peculiar to itself, and two common to the skull and the face. These bones are joined to one another by sutures, or indentations of one bone, which receive the projections of another. These sutures are incomplete at birth; and hence, during labour, the shape of the child's head may be altered considerably, and accommodated to the passages. Another advantage of the sutures of the skull is, that when a fracture happens from external violence, this crack is commonly stopped at the sutures, instead of extending unlimitedly over the head. In children, the sutures are incomplete for a considerable time; and particularly at the top of the head, there is a pretty large opening for a year or two. In old skulls, the sutures are sometimes nearly obliterated. The skull is not composed of bones of a uniform structure and thickness throughout; but there are two bony plates, or tables as they are called; and a spongy cellular substance termed the *diploë*, is interposed between them. The outside of the skull on its upper part, is smooth and equal, and like other bones is covered with a

thin membrane, which, in this place, is called the *pericranium*, and by the parts which compose the hairy scalp. At the lower part of the skull, there are "numerous risings, depressions and holes, which afford convenient origin and insertion to the muscles that are connected to it; and allow safe passage for the vessels and nerves that run through and near it." The inner surface of the upper part of the skull is commonly smooth; it lies close on the strong membrane which invests the brain, and is connected to that membrane by numerous blood-vessels, which also form a communication with the external parts.

The skull is subject to the same diseases as other bones; and especially to the effects of the venereal poison. When sharp points of bone project from the internal part of the skull, and injure the brain, severe headach, epileptic fits, palsy, or apoplexy, may be the consequence. Tumours may also grow within the skull, and produce pressure on the brain, or on the nerves of sense or motion; occasioning various morbid states, according to the parts which are pressed upon.

The skull is also liable to dangerous injuries from external violence. The most noted of these injuries is fracture. This may be merely a fissure, or crack, so fine as hardly to be perceptible; or it may be accompanied by much shattering of the bone, part of which may be driven in upon the brain. Whether the injury appear great or small, it should never be neglected; the important organs which the skull contains can hardly fail to suffer when it is broken; and the connexion of the parts within and without the skull, renders it probable that external violence will be followed by inflammation of the brain or its membranes; apoplexy, occasioned by blood poured out from the vessels; or compression or concussion of the brain. *See* BRAIN, *Inflammation of; Compression and Concussion of*, &c.

While there is merely a fissure, and no bad symptoms ensue, we are not warranted to perform any operation on the skull; but when the bone is depressed, and dangerous symptoms appear, we are to remove the pressure by raising up the bone which is beaten in upon the brain. A lever, which surgeons call an elevator, is to be put under the piece of the skull which we mean to raise; but it often happens that we have no sound spot to serve as a fulcrum for the lever, or that we cannot get in its point; and in such cases, one or more pieces of sound bone must be removed by the operation of trepanning. *See* TREPAN.

SLEEP. That state in which the powers of sense and voluntary motion are suspended, in order to recruit the powers of the system, exhausted by the continued actions which they exert. All animals generally sleep in the night, when the silence and darkness remove the ordinary impressions on the senses; and the continuance of sleep varies much according to the age, constitution, habit, and other circumstances of the individual. New-born children sleep a great deal, and thus their nutrition in the very early periods of life is favoured, while the parent in her weakened state is less fatigued. It is impossible to specify a period for the duration of sleep, which shall be adapted to all constitutions; but, in an adult healthy person, from six to eight hours may be reckoned sufficient. Too much sleep blunts the faculties, and predisposes to listlessness and inactivity of mind and body; it also gives rise to a flabby, corpulent, and unwieldy habit. A disturbed and unsound sleep arises from a variety of causes; from the presence of feverish and other diseases, from disordered bowels, from too great fulness of stomach with meat or drink. Sleep is also prevented by uneasiness of mind, by a certain degree of cold; by light, noise, and other impressions on the senses; and in some persons, by the use of green tea, or of coffee.

To bring on sleep is often an essential object in several diseases. The medicines which have this power are called narcotics, and are of primary importance in the practice of physic. Of

these, the most generally useful are opium and its various preparations, henbane, and hemlock.

The morbid or imperfect kinds of sleep are of various kinds, and present some very remarkable phenomena, interesting both to the metaphysician and to the medical observer. The most noted of these occurrences is dreaming, and walking in one's sleep. *See* DREAMING.

SLEEP, WALKING IN, *or Somnambulism.* The propensity which some people have to walk in their sleep. This very dangerous and morbid inclination is observed in different degrees. Sometimes persons merely get out of bed, and repeat the actions of the day, or go to the places they usually frequent at other times; sometimes they climb to the tops of houses, or go to places which, in their waking hours, they would shudder to approach. Like dreaming, and various mental operations, we are ignorant of the cause of sleep-walking. To cure it, we should correct whatever bodily ailment we can discover, whether it be a state of debility, or what is considered as more particularly indicating derangement of the nervous system. Precautions should always be taken to prevent sleep-walkers from hurting themselves; by having a person to watch them while asleep, and apply proper restraint when they rise to walk; or by putting a vessel of water by the bed-side, into which they will step, and be immediately awakened. The windows should be properly secured. Perhaps altering the time of taking the last meal, or the time of going to bed, might contribute to break the habit.

"Somnambulism," says Dr. Abercrombie, "appears to differ from dreaming chiefly in the degree in which the bodily functions are affected. The mind is fixed in the same manner as in dreaming, upon its own impressions, as possessing a real and present existence, in external things; but the bodily organs are more under the control of the will, so that the individual acts under the influence of his erroneous conceptions, and holds conversation in regard to them. He is also, to a certain degree, susceptible of impressions from without through his organs of sense; not however so as to correct his erroneous impressions, but rather to be mixed up with them. A variety of remarkable phenomena arise out of these peculiarities, which will be illustrated by a slight outline of this singular affection.

"The first degree of somnambulism generally shows itself by a propensity to talk during sleep; the person giving a full and connected account of what passes before him in dreams, and often revealing his own secrets or those of his friends. Walking during sleep is the next degree, and that from which the affection derives its name. The phenomena connected with this form are familiar to every one. The individual gets out of bed; dresses himself; if not prevented, goes out of doors; walks, frequently over dangerous places in safety; sometimes escapes by a window, and gets to the roof of a house; after a considerable interval, returns and goes to bed; and all that has passed conveys to his mind merely the impression of a dream. A young nobleman, mentioned by Horstius, living in the citadel of Breslau, was observed by his brother, who occupied the same room, to rise in his sleep, wrap himself in a cloak, and escape by a window to the roof of the building. He there tore in pieces a magpie's nest, wrapped the young birds in his cloak, returned to his apartment, and went to bed. In the morning, he mentioned the circumstances as having occurred in a dream, and could not be persuaded that there had been any thing more than a dream, till he was shown the magpies in his cloak. Dr. Pritchard mentions a man who rose in his sleep, dressed himself, saddled his horse, and rode to the place of a market which he was in the habit of attending once every week; and Martinet mentions a man who was accustomed to rise in his sleep, and pursue his business as a saddler. There

are many instances on record of persons composing during the state of somnambulism; as of boys rising in their sleep, and finishing their tasks which they had left incomplete. A gentleman, at one of the English Universities, had been very intent during the day in the composition of some verses which he had not been able to complete; during the following night he rose in his sleep, and finished his composition; then expressed great exultation, and returned to bed.

"In these common cases the affection occurs during ordinary sleep; but a condition very analogous is met with, coming on in the day-time, in paroxysms, during which the person is affected in the same manner as in the state of somnambulism, particularly with an insensibility to external impressions; this presents some singular phenomena. These attacks, in some cases, come on without any warning; in others, they are preceded by noise or a sense of confusion in the head. The individuals then become more or less abstracted, and are either unconscious of any external impression, or very confused in their notions of external things. They are frequently able to talk in an intelligible and consistent manner, but always in reference to the impression which is present in their own minds. They, in some cases, repeat long pieces of poetry, often more correctly than they can do in their waking state, and not unfrequently things which they could not repeat in their state of health, or of which they were supposed to be entirely ignorant. In other cases, they hold conversation with imaginary beings, or relate circumstances or conversations which occurred at remote periods, and which they were supposed to have forgotten. Some have been known to sing in a style far superior to any thing they could do in their waking state; and there are some well-authenticated instances of persons in this condition expressing themselves correctly, in languages with which they were imperfectly acquainted. I had lately under my care, a young lady, who is liable to an affection of this kind, which comes on repeatedly during the day, and continues from ten minutes to an hour at a time. Without any warning, her body becomes motionless, her eyes open, fixed, and entirely insensible; and she becomes totally unconscious of any external impression. She has been frequently seized while playing on the piano, and has continued to play over and over, a part of a tune, with perfect correctness, but without advancing beyond a certain point. On one occasion, she was seized after she had begun to play from the book a piece of music which was new to her. During the paroxysm, she continued the part which she had played, and repeated it five or six times with perfect correctness; but, on coming out of the attack, she could not play it without the book.

"During the paroxysms, the individuals are, in some instances, totally insensible to any thing that is said to them; but in others, they are capable of holding conversation with another person with a tolerable degree of consistency, though they are influenced to a certain degree by their mental visions, and are very confused in their notions of external things. In many cases, again, they are capable of going on with the manual occupations in which they had been engaged before the attack. This occurred remarkably in a watchmaker's apprentice mentioned by Martinet. The paroxysms in him appeared once in fourteen days, and commenced with a feeling of heat extending from the pit of the stomach to the head. This was followed by confusion of thought, and this by complete insensibility; his eyes were open, but fixed and vacant, and he was totally insensible to any thing that was said to him, or to any external impression. But he continued his usual employment, and was always much astonished, on his recovery, to find the change that had taken place in his work since the commencement of the paroxysm. This case afterwards passed into epilepsy.

"Some remarkable phenomena are presented by this singular affection, especially in regard to exercises of memory, and the manner in which old associations are recalled into the mind; also in the distinct manner in which the individuals sometimes express themselves, on subjects with which they had formerly shown but an imperfect acquaintance. In some of the French cases of epidemic "extase," this has been magnified into speaking unknown languages, predicting future events, and describing occurrences of which the persons could not have possessed any knowledge. These stories seem in some cases to resolve themselves merely into embellishment of what really occurred, but in others there can be no doubt of connivance and imposture. Some facts, however, appear to be authentic, and are sufficiently remarkable. Two females mentioned by Bertrand, expressed themselves during the paroxysm very distinctly in Latin. They afterwards admitted that they had some acquaintance with the language, though it was imperfect. An ignorant servant girl, mentioned by Dr. Dewar, during paroxysms of this kind, showed an astonishing knowledge of geography and astronomy; and expressed herself, in her own language, in a manner which, though often ludicrous, showed an understanding of the subject. The alternations of the seasons, for example, she explained by saying, that the earth was set *a-gee*. It was afterwards discovered that her notions on these subjects had been derived from overhearing a tutor giving instructions to the young people of the family. A woman who was, some time ago, in the Infirmary of Edinburgh, on account of an affection of this kind, during the paroxysms mimicked the manner of the physicians, and repeated correctly some of their prescriptions in the Latin language." (Dr. Abercrombie *on the Intellectual Powers.*

SLOUGH. A mortified portion of animal body, which separates from the sound parts. Sloughs may either consist of the skin, and more or less thickness of the parts beneath; or they may be the condensed cellular substance in the heart of a boil, stye, or other abscess.

SMALL-POX. The universality of small-pox, and the severity of its symptoms, rendered it formerly an object of extreme interest, especially to parents; and although from the discovery of cow pox, its ravages on life and beauty have been less general and fatal, it must still remain a matter of importance accurately to distinguish and successfully to treat it.

It is unnecessary to enter here into the question, whether the disease was known to the ancients, or whether it first made its appearance among the Arabians. Some plausible reasons have been adduced to show that the ancients did know it; while, on the other hand, we cannot but think, that a disease which enters much into the personal and domestic history of every individual, which fills every parent with anxiety either for the life or beauty of his offspring, would have found its way into popular language, and into the writings of historians and poets.

There are two forms assumed by small-pox, termed by physicians *distinct* and *confluent*, and popularly, though with less accuracy, a *good* and *bad* kind; which are so varied in their symptoms and general termination, as to require a separate description.

Of the Distinct Small-Pox. The patient is seized with coldness, or shiverings, which soon abate, and are followed by a hot stage, which lasts for two or three days; during which, children are liable to sickness and vomiting, to starting in their sleep, or to epileptic fits; and adults are disposed to sweating. Towards the end of the third day, the eruption appears, and increases during the fourth day. It commonly appears first on the face, then on the lower parts, and is completed over the whole body on the fifth day. The fever commonly abates about the coming out of the eruption; the sickness, vomiting, fits, and other oppressive symptoms go off; and the patient is, for

the time, free of uneasiness. The eruption appears in small red spots, hardly rising above the skin, but which by degrees form pimples. On the fifth or sixth day, a small vesicle, containing a colourless fluid, appears on the top of each pimple. These get broader on the seventh day; and about the eighth, are raised into round pustules. These pustules are surrounded with a circular inflamed border; and as they increase in size, about the eighth day, the face is considerably swelled, and the eye-lids are sometimes completely closed. The matter in the pustules now becomes thick and white, or yellowish, exactly resembling the matter of an abscess. On the eleventh day, the swelling of the face subsides, and the pustules appear quite full. "On the top of each, a darker spot appears; and at this place, the pustule, on the eleventh day, or soon after, is spontaneously broken, and a portion of the matter oozes out; in consequence of which the pustule is shrivelled and subsides; while the matter oozing out, dries, and forms a crust upon its surface. Sometimes a little only of the matter oozes out; and what remains in the pustule becomes thick, and even hard. After some days, both the crusts and the hardened pustules fall off, leaving the skin which they covered of a brown red colour; and it is only after many days, that the skin in these places resumes its natural colour. In some cases, the parts covered suffer a scaling off of the skin, and a small pit or hollow is left. This is the course of things on the face, and successively, the pustules on the rest of the body take the same course." (Dr. Cullen.) On the tenth and eleventh days, a swelling arises in the hands and feet, but this goes off as the matter ripens. When the pustules on the face are numerous, there is some degree of fever about the tenth and eleventh days; but in distinct small-pox, it soon abates. An uneasiness in the throat, with a hoarseness of the voice, comes on about the sixth or seventh day, and much saliva flows from the mouth. This soon becomes thick and tough, and being with difficulty spit out, is productive of great uneasiness. The inside of the mouth and throat has numerous pustules; and in all probability, the whole internal surface of the bowels is affected in the same manner. In the apartment of those affected with small-pox, there is in many cases a strong, peculiar, and nauseous smell, which remains even for months after the disease has entirely subsided. When the pustules blacken, the whole appearance is very loathsome, and presents a striking contrast to the blooming health and beauty which existed but a few days before.

Confluent Small-pox. This kind of the disease is marked by the greater violence of the feverish symptoms in the first attack, by the strength of the convulsions, which sometimes destroy the patient even before the eruption appears; and by the very great number and clustering together of the pustules, especially on the face. The whole tendency of the disease is to a putrid, malignant, and debilitating kind; bearing the same analogy to the distinct small-pox that typhus fever does to pure inflammatory fever. After the eruption, the fever abates a little, but never goes off entirely; and soon after returns with severity, and continues through the whole course of the disease. The vesicles appear sooner on the tops of the pimples; they are not of a round figure, but irregular; and numbers of them run together, forming large patches. The matter does not become thick and yellow as in the distinct small-pox, but the vesicles appear flat and shrivelled; and where the skin is to be seen, it is pale and flaccid. The secondary fever about the eleventh day is renewed with considerable violence.

It is not any difference in the contagion, or in the matter inserted, if the disease be communicated by inoculation, that causes the difference in the malignity of the disease; as it not unfrequently happens, that a child with small-pox of a

very bad kind, imparts the disease to another, who takes it in a very mild and favourable way; and the reverse of this also very often happens. The cause seems to be in the greater inflammatory or putrid state of the constitution receiving the infection.

After the small-pox has gone off, there is great tendency to boils and inflammatory symptoms in different parts of the body; and, like the measles, it often calls into energy various unhealthy action, producing swelling of the glands of the neck, ophthalmias, and the like. Many lose their sight by injuries done to the eyes, during the inflammatory period of the disease. Another unpleasant consequence is the pittings which occur after small-pox, totally disfiguring the countenance, and altogether altering its expression.

Treatment in SMALL-POX. We are not to expect the sickness, vomiting, heat, thirst and fever, which occur before the eruption appears, to be totally escaped by any mode of practice whatever; but they may certainly be very much alleviated, and their influence on the subsequent disease much diminished. One very alarming symptom, especially in children, is the occurrence of convulsions. This symptom, as well as the very severe feverish ones, used to be much aggravated by the hot regimen formerly in vogue; and they are materially alleviated, or even prevented by the free admission of cold air, and of tepid or even cold bathing. The same heating plan was undoubtedly the cause of the abundant confluent small-pox, so general under that practice; by which such numbers lost their life, or their eye-sight, and were otherwise so much pitted and scarred. It is found that a cooling plan of treatment is by far the best, in the early stages of the disease; that it renders the eruptive fever moderate, and prevents many of the inflammatory and putrid symptoms which would otherwise occur afterwards. So confirmed is it by experiment, that the confluent nature of the small-pox is very much occasioned by heat, that on any particular portion of the body we can, by covering it with plasters, bring out a more plentiful crop of pustules than on others; and since the more rational and cooling plan has been in use, fewer persons appear with the numerous pits that formerly were left, both on the face and other parts of the body. In an adult person, if the fever be very violent, it will be proper to admit cold air very freely, to give purgative medicines and cooling drinks; and in those of a full and plethoric habit even blood-letting may be necessary; bearing in mind the possibility of the disease assuming a debilitating typhoid form, and being cautious as to the repetition of it. Dr. Currie of Liverpool even employed the affusion of cold water, with the effect of evidently rendering the disease milder. The giving of an emetic at the commencement of small-pox is a good practice, both as determining to the skin, and freeing the stomach and first passages from undigested aliment, which would aggravate future symptoms. The irritation during the ripening of the pustules is so great, that we are compelled to allow anodyne medicines, taking care to prevent costiveness by laxative medicines and clysters. For the swelling of the throat and the salivation, we apply blisters externally, and employ cleansing gargles of various acids, and preserved fruits. When the secondary fever occurs in the distinct small-pox, it is to be considered as of an inflammatory tendency, and to be treated by purgatives, cool regimen, and prudent blood-letting; but in the confluent form, it will probably be a fever of a putrid kind, where these remedies are improper; and where, with the other means of curing fever, we must employ bark, wine, and other cordials to support the strength. It is often a distressful thing to have to treat children in bad small-pox, as it is difficult, if not impossible to get them to swallow the bark in sufficient quantity; in such cases, we have reason to be pleased with the modern discovery of the sulphate of quinine. Opiates are very ne-

cessary, as also the usual strengthening medicines and cordials, as tincture of bark and cinnamon, camphor julep, and the like. The convalescence is sometimes very tedious; and like measles, small-pox excites scrofula and other disorders of the constitution. Sometimes large boils form in different parts of the body; these are to be treated with poultices and the usual dressings; and in many cases these boils, even when large and painful, may be considered as salutary, and having a tendency to diminish unhealthy action in other parts of the body. No means have yet been devised to prevent the pitting left by small-pox.

Of Inoculation. It having been discovered that among the natives of Georgia, where personal beauty is, for certain reasons, of much importance, it had been the practice to communicate the small-pox by the introduction of a small portion of matter, and that a greater proportion of the inoculated were restored to health unmarked, than when the disease was taken in the natural way, the practice was adopted by the physicians of Europe, and with very evident advantage. It was found that though many died who took the small-pox by inoculation, the number was much fewer than of those who took it naturally; that physicians had it in their power to choose the most favourable state of the constitution, and the most proper seasons of the year, and to adopt any other precaution against the violence of the disease, that experience had shown to be necessary. At the same time, although the inoculated had the disease generally rendered safer to themselves, they still had the power of spreading the infection, and thus of increasing the risk to others. This was, therefore, one very important advantage of *cow-pox*, that while it secured the patient, it added nothing to the danger of his neighbours. So few respectable practitioners in the present day will consent to inoculate for small-pox, that it is rather as a piece of history, than as giving any directions for the practice of inoculation for small-pox, that we now mention a few of the circumstances which were formerly thought to recommend it. The subject chosen for inoculation could be taken when in good health in other respects, and free from any inflammatory tendency; he could be prepared by prudently lowering any feverish state by purgatives or low diet; a proper season of the year might be chosen, when we could avoid either extreme cold, or extreme heat; and after the matter had been inserted, which prudence would direct to be done from as healthy a subject and as good a pock as possible, we could still keep the patient, with respect to diet, air, and regimen, in a state favourable for an easy progress through the disease. Matter for inoculation should be taken at an early period of the pustule.

SMELLING. The sense by which we perceive the various odours of bodies; a very useful auxiliary to our acquiring the knowledge of what substances are salutary or otherwise, and it is therefore placed near the organ of taste, that the two senses may assist each other. Smelling is impaired by various disorders, especially by a common cold, but it returns when the disease goes off. Some persons are naturally without the sense of smelling.

SNEEZING. A strong spasmodic action of the muscles used in expiration, by which the air is forcibly expelled from the lungs with a loud noise. It is excited by snuff, and other acrid substances applied to the nose, and by a strong light suddenly thrown upon the eyes. It aids in the expulsion of substances sticking in the wind-pipe or gullet. Sneezing is a very common symptom of catarrh, and at the commencement of measles.

SNUFF. *See* TOBACCO.

SNUFFLES. A catarrhal complaint in very young infants, by which their breathing is rendered difficult, and is performed with a considerable sound through the nose. It proceeds from imprudent exposure of the child to cold at a very

early period after birth, and is attended with most of the symptoms which characterise a cold in older people. The child is feverish and unwell, its bowels are disordered, and it has cough or sneezing. The cure consists in its being kept in a moderate degree of warmth, bathing in tepid water, and giving a little castor oil or other laxative medicine, taking care, at the same time, that the mucus do not obstruct the nostrils. If the disease is obstinate, an emetic may be tried.

Bad SNUFFLES, *or Coryza Maligna.* There is a more severe and even malignant kind of snuffles, to which some infants are liable. The discharge is purulent from the beginning, and afterwards becomes bloody; the children breathe with difficulty, especially when asleep. This difficulty of breathing is not constant; sometimes the children are free from it; at other times, it is necessary to watch them sleeping and waking, in order to open their mouth when requisite. There is generally a purple streak at the verge of the eye-lids, and a fulness about the throat and neck externally; the almonds of the ear are swollen, and of a dark-red colour, with ash-coloured specks; and in some cases, extensive ulcerations. The patients generally die with convulsions or marks of debility. The disease consists in an inflammation of the membrane lining the back part of the nostrils and contiguous parts. Hence the plentiful secretion of purulent matter, part of which descending into the stomach and bowels, disorders them, and occasions great weakness.

Treatment. Particular attention is to be paid to the bowels, both for the sake of reducing the inflammation about the nose and throat, and to carry off the acrid matter swallowed, that it may not injure the bowels. The nose and throat are to be washed with milk and water; or if the complaint continues for some weeks, a weak decoction of oak-bark may be used as a wash. The strength is to be supported by diet; and by cordial medicines, such as the little patient can be made to take, with the sulphate of quinine. If convulsions come on, opium, and other antispasmodics are to be used.

SOAP. A mixture of alkali and oil, of great utility as a cleanser, the acrimony of the alkali being blunted by the blandness of the oil, and so rendered fit to be applied to the skin. There are various kinds of soap; the hard soap, composed of soda and olive-oil, and the soft, composed of oil and potass. The hard, or Castile Soap, is used in the formation of several pills; and the alkaline properties of soap have occasioned it to be given as a medicine for the alleviation of calculous complaints. A tincture of soap, or solution of soap in alcohol, either alone or with opium, is a good application for sprains, swellings, and other external uses; and answers the purpose of what is called embrocation or opodeldoc.

SODA. One of the fixed alkalis, commonly called the mineral alkali, as distinguished from potash, the other fixed alkali, which is usually obtained from vegetables. Soda is very seldom used in a separate state; but more commonly combined with carbonic acid, from which it is easily disjoined, as the carbonic acid readily quits it when a stronger acid is brought into contact with it.

SODA POWDERS, as they are called, are useful in various disorders of the digestive organs. Their good properties are owing not to the soda, but to the carbonic acid, which is disengaged from the carbonate of soda by the application of a stronger acid, either the citric or the tartaric. The method of using them is this. Dissolve the carbonate of soda, about one drachm in two ounces of water; and an equal quantity of the tartaric acid in another glass; put the two solutions together, and when they are in the act of effervescing, let them be drank speedily; or they may be taken separately, and the effervescence or disengagement of carbonic acid will go on in the stomach.

SODA WATER is water strongly impregnated with carbonic acid, disengag-

ed from the carbonate of soda. By proper pressure, water can be made to take up six times its bulk of carbonic acid. Soda water is brisk and sparkling, of a pleasant sub-acid taste, but should not be drank during dinner or immediately after it; as the great quantity of carbonic acid (fixed air) which it contains, being disengaged, inflates the stomach, and prevents those muscular actions of it which are necessary for the conversion of the food into chyme.

SOLANUM DULCAMARA, *See* BITTER-SWEET.

SOLID FOOD, all kinds of food that require mastication, opposed to liquid or spoon-diet.

SOLIDS, the bones, ligaments, membranes, muscles, nerves, and vessels.

SOLUTION. When a solid body is capable of intimate commixture with a liquid, so as to be completely diffused through every part of it, it is said to be soluble, or capable of solution.

SOMNAMBULISM, walking in sleep. *See* SLEEP.

SORE EARS OF CHILDREN. *See* EARS, &c., *page* 225.

SORE MOUTH. *See* THRUSH.

SORE NIPPLES. *See* NIPPLES.

SORE THROAT. *See* THROAT.

SOUND. An instrument which surgeons introduce through the urethra into the bladder, in order to discover whether there is a stone in that cavity or not. The sound is usually made of very highly polished steel, that it may be well calculated for conveying to the surgeon's fingers the sensation of any thing against which its end may strike.

SOUR CROUT. A preparation of cabbage, which has been found useful as a preservative from sea-scurvy, in long voyages. The soundest and most solid cabbages are selected, and cut very small. The cabbage thus minced is put into a barrel in layers, six inches deep, and over each layer is strewed a handful of salt and caraway seeds; it is then rammed down with a rammer, layer after layer, till the barrel is full, when a cover is put over it, and it is pressed down with a heavy weight. After standing some time in this state, it begins to ferment; and it is not till the fermentation has entirely subsided, that the head is fitted to it, and the barrel is shut up and preserved for use. No vinegar is employed in this preparation.

SPASM. An irregular action of muscles or muscular fibres, without the direction of the will, generally attended with some degree of pain, and when extensive or general, giving rise to many, and even to fatal, diseases. Some diseases consist almost entirely of spasms, as the locked jaw, and the painful distortions of the body accompanying it. Other diseases, as hysterics, epilepsy, and some others, have a variety of symptoms complicated with the spasm. The disorders of the stomach and bowels, accompanied with spasm or irregular action, are very numerous and important; cramp in the stomach, griping in the bowels, the iliac passion, are instances of this.

Causes. Spasm is owing either to irritation or debility. The irritation of worms in the intestines, of hurtful matter in the stomach; of teething, sharp or acrid substances hurting the skin, tumours pressing upon nerves, are known to occasion spasm by irritation. Spasm from debility is seen in hysteria, and in those who have been weakened by long diseases, or by large bleedings.

Treatment. If we discover, and can remove the irritating cause, this is the first thing to be done. The spasm is to be put an end to, if possible, by the means after mentioned; and if it has been owing to debility, the proper measures are to be resorted to for strengthening the body.

The medicines and appliances which relieve spasm, are called antispasmodics; and they are chiefly remarkable for making a strong impression on the senses, and for quickly putting an end to the spasm. Thus in the paroxysm of asthma, a draught of ether and laudanum, in many cases, gives almost instant relief;

and in the griping and violent spasms of the bowels, the warm bath, or cold water dashed suddenly on the lower extremities, or laudanum or hot drinks, allay the spasm.

SPASMODIC, of the nature of spasm, applied to those diseases in which spasm is a principal symptom; thus we speak of *spasmodic* cough, *spasmodic* asthma.

SPECIFIC. A medicine is said to be a *specific*, when it almost universally cures a particular disease, without our being able to trace the manner in which it does this. Thus, the Peruvian bark is said to be a specific in intermittent fever, and sulphur in the cure of the itch.

SPECKS on the eye, are small opaque spots on the clear part of that organ, generally the consequence of severe previous inflammation. If they do not disperse by a continuance of the methods employed for the cure of the original disease, some have recommended to touch them carefully with very diluted lunar caustic, on the point of a camel's hair pencil, or to use a wash made by dissolving three grains of lunar caustic in an ounce of water. Mercurial medicines may be given internally, and ophthalmic ointments applied. When specks are not numerous, and not near the centre of the clear cornea, they occasion no inconvenience except the deformity. *See* EYE, *Diseases of, page* 251.

SPECTACLES "are either convex, concave, or plain. The first are adapted to old persons; the next to those who see with distinctness only at a small distance; and the third, formed of glass with a light green or blue shade, are designed to defend weak eyes from too strong a light. Those who wear spectacles should be very cautious to have the glasses ground with the most perfect accuracy, and should apply to opticians of credit, rather than to itinerant Jews; for the aberrations of the rays produced by an imperfect figure of the glass, strain the eye to distinguish the image, from this cause indistinct. For a similar reason, the glasses of old people should be not at all, or very slightly tinged; and the glare which arises from a candle, or a strong sun, may be better avoided by a shade against the former; or over the eye, to guard against the latter.

"It has been doubted whether spectacles should be used to preserve the sight. We think that in old persons they will be useful: with the near-sighted, who are usually young, they should be discouraged. Old people will save their eyes, and there is little danger of exhausting the degrees of convexity; indeed none. The young will not indeed exhaust the degrees of concavity; but the other senses should be kept on the alert, while they can supply the place of distinct vision. The hearing, the feeling, even the facility of conjecture, are kept alive by disusing spectacles; and we should improve all our powers. As we have already hinted, the near-sighted person should use the number next below that of distinct vision, and he will soon attain it. Habit, in this way, will coincide with the change which age induces; and not to see with the utmost acuteness, is still an advantage to those who could otherwise see very imperfectly. All this is, however, refinement; for spectacles used with little caution or discrimination have seldom done harm, if the glasses are good. Pebbles, which admit not of scratches, should be, in every instance, preferred." (PARR's *Medical Dictionary Art. Conspicillum.*)

SPERMACETI. An unctuous substance obtained from a cavity in the head of a certain species of whale. It is sometimes used internally in the form of emulsion, and agrees with the concrete fixed oils; but for plasters and ointments, oil and wax are equally good with spermaceti.

SPHACELUS. When the mortification of a part has proceeded to such a degree that the part is black, putrid, and has its texture completely destroyed, such state is called *sphacelus.*

SPINAGE, *Spinacia oleracea.* A plant whose leaves are used at table. They

are not very nourishing, but they are laxative, diuretic, and cooling. Spinage, when well boiled, seems one of the most easily digested of vegetables.

SPINE. The bony column, of which the back-bone is a conspicuous part, and gives its name to the whole, from the spinous or thorn-like projections of it. The spine is composed of twenty-four bones, separable from each other and moveable, which are called *true vertebræ;* and at the lowest of the true vertebræ is situated the sacrum or rump-bone, which, with its terminating appendage, the coccyx, are called *false vertebræ.* The whole spine is so constructed as to furnish a canal for the prolongation of the brain, called the spinal marrow; which sends out nerves, and is in all respects analogous to the brain. The spine is subject to various diseases, to caries, and distortion or curvature.

SPINE, CURVATURE OF. This is a very common complaint in early youth. It arises sometimes from debility, or rickets, sometimes from blows or other accidents, and frequently from sedentary employments, or being too much confined to one posture, as frequently happens to children whose education is forced on with too great rapidity. It is also a consequence of too rapid growth of the trunk of the body.

Symptoms. The patient at first has listlessness, languor, and want of appetite; no complaint is made of any particular part; but, in a short time the legs begin to fail. On standing, the knees involuntarily bend forward, and in walking, the legs cross each other. There are now cramps or pains in the thighs and legs, and afterwards the powers of sense and motion are lost. These symptoms, at first, are supposed to arise from debility; but when more particular examination is made, the spine is found to be in some degree distorted. "The curvature is most commonly from within outwards, but sometimes on one side. In the latter case, however, there is generally a double curvature: for, if the first deviation is unnoticed, the patient, to relieve himself from an uneasy position, rests chiefly on the opposite side, and this posture produces the second curvature. The complaint originates from a disease of the cartilages and ligaments, communicated to the bones; it appears to be the languid inflammation of scrofulous habits, and to terminate in caries. The starting of the vertebræ from their proper line seems to be owing to the unequal erosion, and, of course, to the want of a uniform support.

Treatment. "While the state of the general health is attended to by general remedies, not only with a view to the debility, but to the scrofulous habit, the particular care of the surgeon must be directed to the curvature; and the best means of relieving it is the plan suggested by Mr. Pott, in procuring a considerable local discharge on each side, as near the curvature as possible, but beyond the spinal processes of the protruded bone. Tenderness in this case is cruelty; and the issue made either with the knife or the caustic, should be large enough to contain a horse-bean. If the curvature be considerable, the size of the issue should be increased. The discharge should be continued till the complaint is in a great measure relieved, and the degree of amendment may be judged of by that of the general health. During the continuance of the discharge, the complexion becomes clearer, the appetite is improved, the general strength is increased; sensation and motion are gradually restored. It has been supposed that the curvature may be reduced by this measure; we dare not deny that it will be lessened, but we have never found it so in any considerable degree. The chief effect is to relieve the inflammation of the bones and cartilages. The curvature may be prevented from increasing during the action of the drains, and possibly, at last diminished by the use of machines, constructed by artists on proper principles. After the inflammation is checked, sea-bathing may be ordered; during which

the issues are to be covered with leather, secured by a margin of sticking plaster." (Dr. Parr.)

SPINE, Divided, *Spina Bifida.* A swelling on the spine of new-born children, at the lower part of the loins, at first of a bluish colour, but at length becoming paler, and then transparent. It is generally attended with a weakness or palsy of the lower extremities. Some have opened the tumour, but with very bad success, as the infants have died immediately. Whether the tumour be opened or not, it is a very fatal disease, few children affected with it living above three years. The only method that appears to have been at all serviceable, is pressure gradually and permanently employed; or evacuating the fluid by small punctures, and afterwards inducing such a degree of inflammation as to obliterate the cavity.

SPIRIT. When fermented fluids abounding with saccharine matter are subjected to distillation, there comes over the active, pungent liquor called *alcohol*, or ardent spirits. These receive various names, according to the substances employed. Brandy is procured from wine, rum from the fermented juice of the sugar-cane, whisky and gin from the fermented infusion of malt or grain. All ardent spirits consist of three ingredients, water, pure spirit, and a little oil or resin, to which last they owe their peculiar colour and flavour. Ardent spirits when taken into the body excite every part of the system, render the pulse full and quick, exhilarate the mind, and increase the muscular strength; hence as a medicine, they may be useful in diseases of debility and languor, and may furnish a useful stimulus in a variety of cases. But from their extraordinary and concentrated activity, from their furnishing a rapid mode of drunkenness, from their easily producing a pernicious and deceitful exhilaration, they are apt to produce a craving for their own repetition, and to produce bad effects on the character and constitution of those who indulge in them. A very frequent consequence of indulging in spirituous liquors, is a disorder of the digestive powers. Hence the long train of stomach complaints of which dram-drinkers are the subjects; flatulence, indigestion, gnawing pains, which tempt them to recur to the fatal dose. They are subject to various affections of the liver, particularly that hardened state of it which often ends in dropsy, and other symptoms of a broken constitution. The use of spirits predisposes also to inflammatory attacks of various organs, to erysipelas; and also to disorders of the head, ending in apoplexy and palsy. Ardent spirits are not rendered any safer by dilution with water, or the mixture of acids and other ingredients; and the habitual use of grog, toddy, punch, and all the varieties of luxurious intoxication, are equally pernicious. *See* Alcohol, *and* Ardent Spirits.

Spirits are excellent solvents of many substances; these solutions are called tinctures. In pharmacy, we use the word *spirit* in a different sense, as when we speak of the spirit of caraway, of cinnamon, of nutmeg, of aniseed, of juniper, &c. This means, that by distilling proof spirit, or alcohol diluted with an equal part of water, along with certain parts of the plants which yield their oil, the spirit becomes impregnated with the smell and flavour of the substance. *Spirits* have the same virtues as the substances from which they are distilled, with the additional stimulus of the alcohol; and their use is to be avoided as much as possible, on the same principle as we avoid the use of drams.

The spirit of salt, the spirit of ammonia, the spirit of nitre, are merely incorrect names bestowed on certain preparations of these substances, which names they get partly because of their pungency, and partly because spirit is used in some part of the process for preparing them.

SPITTING of BLOOD, *Hæmoptysis*, signifies the discharge of frothy blood from the lungs. It is dangerous in itself,

and too often lays the foundation of complaints that will ultimately prove fatal. The disease comes on with a sense of weight and anxiety in the chest; some difficulty of breathing, and a sense of heat at the fore-part of the breast; and not unfrequently a saltish taste is perceived in the mouth. A tickling sensation is felt at the upper part of the windpipe, and to relieve this, the person hawks a little, and this brings up a quantity of blood, florid and frothy. The irritation returns, and the same thing is again repeated; and occasionally a considerable quantity of blood is discharged for many days together. In a case of this kind, it is of great consequence to ascertain from what source the blood proceeds; it may be from the cavity of the mouth itself, from the nose, from the stomach; but we conclude it to come from the lungs when frothy bright-looking blood is discharged by young persons from the age of fifteen to thirty; whose chests are narrow, whose shoulders are high, who are of quick parts, and of a delicate structure; in short, who are of the exquisitely sanguine temperament. There is commonly a degree of fever at the commencement of hæmoptysis.

Cure. As a flow of blood from the lungs may be dangerous from its quantity, or from its occasioning other diseases, it is a necessary measure to take blood from the arm, if there be any degree of fever present; as it is far safer to lose blood in this way, than by the lungs. Rest and quietness are to be enjoined; all exertion of the organs of respiration, as in speaking, singing, playing on wind-instruments, is to be carefully avoided; as also all heating diet and strong liquors. The sulphuric acid is to be taken; and if there be pain in the chest and difficulty of breathing, a blister may be applied. Exposure to cold and fatigue must be avoided, and the feet must be kept dry and warm.

SPLEEN. A large organ situated at the back part of the stomach, so well supplied with blood, that it appears quite purple. Notwithstanding the largeness and probable importance of this organ, its use is as yet unknown. It is liable to become greatly enlarged in those who have often been ill of intermittent fever; and frequent instances of very great alteration of structure have been found on dissection, though the individuals had shown no sign of any disease in that part when alive. As certain parts of the body were anciently supposed to be more particularly concerned in the intellectual functions, the spleen was thought to be the seat of melancholy or peevishness; hence the term *splenetic*, which is still used in that sense.

SPLINT. A piece of wood, iron, or pasteboard, placed along a fractured limb, in order to keep it in its situation. It must be lined or covered with some soft substance to prevent it from chafing the sound parts.

SPONGE, Burnt. Is used in medicine for the cure of wens and other swellings of the neck; and though for some time it was thought quite insignificant, the discovery of iodine in its composition, explains the reason of its having any influence, and has occasioned its being retained in the Materia Medica, with considerable confidence of success. If we prefer the burnt sponge to the more unmixed iodine, the dose is from one to four drachms, in the form of an electuary or lozenges. *See* Iodine.

SPRAIN. A sprain is an injury done to the neighbourhood of a joint, generally the wrists, knees, or ankles, and usually occasioned by a slip or some sudden and violent exertion. Sprains are commonly productive of a painful and inflammatory swelling. There is generally an effusion of serous fluid, from the rupture of exhalant vessels; but sometimes the swelling is discoloured, from blood being effused. In sprains, we are to endeavour to prevent the parts from swelling much, and to check the inflammatory tendency. Both of these ends may be in a great degree obtained, by the application of cold and astringent lotions, such as vinegar

and water, spirits and water, solution of muriate of ammonia, or of sugar of lead, cold water, &c. We are also to apply leeches to the part; and to give cooling laxatives. If the injury has been very severe, and has induced general fever, we may take a bleeding from the arm, and employ active purgatives; continuing the cold applications. When the inflammatory symptoms of sprain have gone off, the place is to be rubbed with some liniment, as camphorated oil or volatile liniment; and it is in many cases useful to pour warm water in a stream from a height on the joint which remains stiff.

SPRUCE-BEER. "An antiscorbutic drink, highly esteemed by the northern sailors, particularly the Newfoundland men, and esteemed useful in many cutaneous complaints of this climate, chronic rheumatism, &c. It derives its whole virtues from the turpentine it contains. An extract of the black or white spruce is imported; two or three table-spoonfuls of which, added to sixteen gallons of water in which as many pounds of molasses have been previously dissolved, is fermented with a due proportion of yeast. When the fermentation is a little abated, it is bottled for use; and as this process still goes on, it soon becomes a very brisk, and not unpleasant drink. In America, Newfoundland, Sweden, Denmark, and Lapland, the branches of the spruce fir are boiled in the water previous to the fermentation." (PARR's *Dictionary.*)

SQUILL, *Scilla maritima.* The root of the sea-onion, or squill, is used in medicine as an expectorant, and to give relief in complaints from the lungs; it is also used as a diuretic. It is apt to occasion sickness and vomiting; and in too large a dose, the vomiting is followed by bloody stools, vertigo, syncope, and death. The dose of squill, as a diuretic, or expectorant, is from one to two grains, twice a-day; and it is conveniently given in the form of the squill pill of the Edinburgh Pharmacopœia; in which one grain of squill is united to three of ammoniacum, three of caraway seeds, and three of extract of liquorice. The dose is two pills, morning and evening. They are useful in catarrhal complaints in asthma, in several dropsical cases, and other diseases. Squill imparts its virtues to vinegar; and the vinegar of squills is a convenient mode of giving it in a liquid form; a pectoral mixture may be made by adding an ounce of squill vinegar to three ounces of the syrup of Tolu, and three or four of cinnamon-water, or peppermint-water. With common syrup, it makes syrup of squill.

SQUINTING. This unseemly deformity frequently occurs as a symptom of various diseases, particularly of those affecting the head; but it goes off when the disease abates, and does not require any particular attention. But when it is merely a local disease, or a bad habit, much may be done to cure or to palliate it, if it be taken notice of in time, and treated with care and skill. In infants, the eye which squints should be closed for some time, more or less, according to the effect; or some bright-coloured object, as a piece of silk, should be applied two or three times a-day, to attract the notice of the child, and to induce him to turn his eye in the proper direction. Children who squint, should wear constantly, for some months, light wooden goggles, which prevent their seeing with both eyes, unless the pupils of both be directed straight forwards. If this be unsuccessful, the sound eye may be tied up, and the goggle adapted carefully to the other eye. Sometimes children squint from imitation, and know they are doing so. The habit must be broken, by the child being carefully watched, and forced by all proper methods to avoid indulging it.

STABS are generally inflicted with swords or bayonets. In the language of surgery, they are called punctured wounds. The external opening is very small, in proportion to the depth. Stabs are always more dangerous than clean cutting wounds, as the parts, besides being divided, generally suffer some de

gree of bruising from the injury; and, from their depth, some important organs will probably be hurt. Stabs are very likely to be followed by inflammation, fevers, and abscesses, and by those narrow windings under the skin, called sinuses. The bad consequences of stabs are best prevented by emollient applications; and in many cases, the previous employment of leeches to the neighbourhood of the wound, followed by a large poultice over the whole, prevents any violent inflammation, and allows the wound to heal without any further trouble. In other cases, suppuration comes on, but it does well. In some punctured wounds, an extension of the opening is necessary; but of this the surgeon is to judge.

STAPHYLOMA. *See* EYE, *and its Diseases, page* 253.

STARCH is obtained from wheat-flour, and a variety of other vegetable substances. It forms a large proportion of the nutritious part of the farinaceous vegetables; and as they are much used in the diet and drink of patients, starch becomes an important article in pharmacy. It is an excellent demulcent in various disorders of the bowels, and is a good vehicle for administering anodyne clysters. A small tea-cup of thin starch, with a tea-spoonful of laudanum, is a good injection to allay pain and tenesmus, or to check looseness.

STEEL MEDICINES are those formed from the preparations of iron. *See* IRON.

STERNUM. The breast-bone.

STERTOR, a sonorous breathing, like snoring; one of the symptoms of compressed brain, either from an injury of the skull, or from an internal cause, as apoplexy.

STETHOSCOPE. A wooden cylinder about eighteen inches long, used by modern practitioners to ascertain the healthy or morbid condition of the organs within the chest. It is well known that wood is an excellent conductor of the vibrations that give the sensation of sound; and that if a person scratch one end of a log of wood many yards in length, another person, by putting his ear to the other extremity, will distinctly hear every sound emitted. On this principle, the stethoscope has been invented. The heart, by its violent and incessant action, imparts a motion and thrilling to the walls of the chest, which an observer can loudly hear by applying the ear to the left side; and the stethoscope enables him to obtain the same information with less trouble to the patient, and without any thing offensive to the most delicate feelings. Hence, those who are well practised in the use of the stethoscope, and who have compared their observations on the living body, with the appearances found in the dead bodies of those who have died of diseases of the heart, are enabled often to detect enlargement of that organ, ossification of its valves, or aneurism of the great vessels; and, although unfortunately this knowledge does not lead to great practical utility in curing those diseases, it is still a great matter to be enabled to give a correct diagnosis, and to know beforehand the probable issue of the case.

The lungs having the air-cells, or ultimate branches of the wind-pipe, pervading every portion of them when in a healthy state, the air rushing into them, and being again expelled, is easily detected by the ear or the stethoscope. If any part of the lungs be thickened and hardened, or impede the entrance of the air to the very limit of the investing membrane, the sound imparted is materially altered, or there is no sound whatever; and hence some are able to point out the very spot where the lungs are unhealthy. The presence of water or matter in the chest, of mucus in the air-cells, and various other deviations from the healthy structure, action, or secretions, may be detected by the skilful and practised use of the stethoscope. The honour of this invention belongs to M. Laennec of Paris.

STILL-BORN INFANTS. In general, the child, as soon as it is born, cries stoutly, giving proof that its respiration

has fairly begun, and that it is capable of living, detached from its parent. But in other cases, no sign of life appears for some time, and the child is said to be *still-born*. By proper means, it may sometimes be brought from that state. When there is any pulsation felt in the navel-string, the child should not be detached from the mother, but warmth should be applied to its body by flannels; the nostrils should be touched with a little hartshorn, the breast should be rubbed with spirits, and the buttocks and soles of the feet should be gently slapped with the open hand. If the after-birth should in the meanwhile be detached, which is known by the cord becoming longer, the infant is to be separated entirely, and the cord being secured by a slip-knot, the child is to be put into water, warmed nearly to the heat of the human blood, keeping the head uppermost, and the mouth and nostrils out of the water. Artificial breathing is to be practised by some person who understands the way of doing it, either by the mouth or by a syringe. If the pulsation of the heart be not restored, the infant is to be taken out of the water, placed before the fire, carefully rubbed, and wrapt in warm flannel. A clyster, made of a few table-spoonfuls of warm water with a tea-spoonful of spirits, is to be thrown up with moderate force. The apparent death may arise from a cause analogous to that of apoplexy in adults; and we therefore sometimes allow a little blood to drop from the end of the cord. We do this the more freely, when the shape of the head is altered from what is natural, when the colour of the face is dark and livid, and when the pulsation in the cord is oppressed. The quantity of blood which we may allow to flow, is from one table-spoonful to two. If the child does not breathe after this discharge, the cord is to be tied, and artificial breathing attempted. All stimulating and irritating means are to be avoided. Sometimes, though a child breathes and cries at first, it very soon becomes pale, and the pulsation of the heart becomes feeble. Stimulants are applied to the surface, as brandy or hartshorn: occasionally we succeed in restoring the breathing and circulation, but generally we fail. Some children are born, having a purple colour of the extremities, and with the breathing unnatural. This probably arises from mal-conformation of the heart or lungs, and the infant soon dies.

STIMULANTS. Medicines or other circumstances capable of exciting the vital energy, whether as exerted in sensation or motion. These are of various kinds. 1. They are such as are applied to the stomach, alcohol, tinctures, wine, &c. In certain states of debility and disease, a very small portion of the mildest food will act as a stimulant. 2. Diffusible stimulants, or such as are easily extended over the whole frame, hartshorn, the shock of the cold bath, or the warm bath, heat, electricity, and galvanism. 3. Tonics, mustard, cantharides.

It will be seen from the above slight enumeration, that in speaking of substances of the first class, we use the term *stimulants* to denote nearly the same thing as cordials; and that the other classes are arranged along with them on account of the similarity of their action. The cases in which general stimulants are useful are those of torpor and debility; but the power of some stimulants is so great, and the constitution is at times so easily affected by them, that much skill and caution is required in their exhibition. Suppose a person debilitated and torpid after a long continued fever or other illness; it would be desirable, no doubt, to restore his strength as quickly as possible. But this is not to be effected by strong stimulants: to him, the use of such in any considerable quantity would probably be fatal. In all diseases of excitement, as inflammations and fevers, stimulants are to be avoided; yet we must not be misled by a name; for at certain periods of typhus fever, wine and the strongest stimulants are necessary.

A more extended meaning is given to

stimulants by some writers on the Materia Medica, who make it the generic term for all medicines that increase the action of any particular part. Under stimulants, they class emetics, as rousing the stomach into action; cathartics, diuretics, sialagogues, and blisters, are all stimulants to certain organs. But having treated of these remedies separately, it is unnecessary to resume them here.

STITCHES, a term in popular use to signify acute and sudden darting pains in any part of the trunk of the body, most commonly applied to pains in the side. Such stitches may arise from inflammation of the lungs and their covering, from rheumatism, and from spasm; and the appropriate remedies, according to each exciting cause, are to be employed.

STOMACACE. A disorder of the mouth, in which the gums are livid, spungy, and easily made to bleed; a symptom of sea-scurvy. Stomacace is often used for scurvy itself.

STOMACH. A large membranous bag, into which the gullet leads, situated under the diaphragm, and opposite to that hollow called the pit of the stomach. In the human subject, it is composed of three coats; the outermost or the peritoneal, the middle or muscular coat, and the innermost or villous coat, covered with mucus, and containing numerous absorbing and exhaling vessels, and a variety of glands which secrete the fluids useful in digestion. The nerves of the stomach are numerous, and come from the eighth pair and intercostals. The stomach is destined to receive the food; and to perform upon it the first, and a very important part of the process of digestion; and this it does, as Dr. Paris quotes from Dr. William Hunter, not as a mill, a fermenting vat, or a stew-pan; but as a stomach. Under DIGESTION, we have given a full account of that important function; and as indigestion and its train of symptoms are diseases peculiarly connected with the stomach, we refer to STOMACH COMPLAINTS for the history and cure of those affections.

"Abscesses and cancers of the stomach are not uncommon. The symptoms of these disorders are commonly, however, vague and uncertain. A general pain, not always confined to the organ, but apparently wandering to different sides of the chest, without any marked shivering, or evening exacerbation, point out general disease, without fixing any particular seat of the complaint." (PARR.)

The sympathy of the stomach with other organs renders it one of the most important parts of the animal economy. Hence the great majority of medicines, which are intended to act on various parts of the body, are first applied to the stomach. By wine, spirits, or opium, and other substances, introduced into the stomach, we can make astonishing changes on the functions of the brain; and not only act upon the corporeal frame, but entirely transform or suspend the intellectual operations; and produce every shade of mental excitement, from the cheerfulness inspired by a temperate draught, to the boisterous violence of intoxication ending in madness. By medicines taken into the stomach, we can increase the action of the heart and arteries; we can aid the functions of the skin, we can allay the pain of gout or stone; nor do we now stop to inquire whether those sympathies be direct, or whether the action of the brain must intervene between the application of the substance to the stomach and the ultimate effect.

STOMACH COMPLAINTS, *Indigestion, Dyspepsia.* This is not a disease which runs a regular course, and quickly terminates either in health or death; but it is long and obstinate, and presents a great variety of symptoms, varying in their degree, and in the order of their succession, in different individuals. Some of the most noted of these symptoms are the following: loss of appetite, sickness, vomiting, flatulence, heartburn, pain or cramp in the stomach. The state of the bowels is very various; sometimes there is great costiveness, at others profuse diarrhœa. All these symptoms are owing

to the unhealthy and irregular actions of the stomach; either the various fluids poured into it are vitiated, or its muscular motions are perverted, or both these deviations from health occur together. Hence the griping pains, the vomiting, or the transmission of undigested aliment, or its long retention, or its reaching the bowels in such a state as to act as a purge; and hence also a deficiency of the fluids which in health stimulate the bowels to regular evacuation, as the bile. Along with unhealthy action of the stomach, other causes of indigestion concur. The liver is frequently diseased; and both its structure and functions become unfit for the purposes of healthy digestion. The appetite is not always bad, but is rather in some cases very keen; but patients should not indulge it, as the stomach is unable to digest the quantity of food they are inclined to take. Flatulence arises from the air which is disengaged from the food during the process of digestion. The heartburn is caused by the presence of acid matter irritating the stomach. This acid is produced during digestion, and certain articles of food, as vegetables, butter, oil, &c. are apt to cause the whole mass in the stomach to become sour. The small quantities of vinegar, or other acids which we take in, have not this acescency in general, but rather tend to help digestion, by their tonic power, and by their checking the fermentation that produces acidity. The cramp and pain, distinct from heartburn, is owing to a spasmodic action of the muscular fibres, well known by the name of cramp in the stomach. Sometimes dyspepsia in all its symptoms is an occasional and transient disorder, from overloading the stomach or taking food in too great variety. Such fits occurring after a surfeit may go off in a few days, but sometimes they last unexpectedly long, even for many weeks. In general, dyspepsia lasts for years, and even to the end of a long life. Though it is attended with great pain, inconvenience, and suffering, it is seldom fatal of itself, but it may lead to diseases in the structure of the stomach, or, by wearing out the strength, may give rise to dropsy. Many dyspeptic patients thrive well and get fat, in spite of their bad digestion; and they may infer from this circumstance, that they take a great deal more into their stomach than is necessary. The mouth is either dry, or it has an increased flow of vitiated saliva thrown into it; and corresponding to this, are the vitiated secretions of the stomach. Many patients think, that to get rid of this secretion by a vomit would relieve them greatly; but the probability is, that such an expedient would only increase it. Some of the most distressing and alarming of the symptoms that attend dyspepsia are those which occur in the head; there is headach more or less acute, ringing of the ears, giddiness, dimness of sight, various odd depravations of that sense, as seeing objects aslant, or only one half of them. Such affections of the head and of the sight arise from the wonderful but unexplained connexion between the stomach and brain. In dyspepsia, the liver and the secretion of bile are affected; and when the bile, by the action of vomiting, is brought up from the intestines and forced out by the mouth, it is believed by the patients that bile is the cause of their disease. Hence the grievous complaints that patients make of their being bilious, or having the bile on their stomach. Those who have been long resident in warm climates are liable to derangement of the biliary system, and in them dyspepsia is a symptom of their original disease. Those who are intemperate in the use of spirituous liquors, have also great derangement of the liver and its functions; and have dyspepsia in a double right, by the disease of the liver and by that of the stomach. Sometimes in dyspepsia, the kidney is affected, and there is a tendency to gravel.

STOMACH COMPLAINTS, *Causes of.* The knowledge of these is of great importance, as without attention to them it is vain to attempt a cure; but by proper attention

to these causes, we may alleviate the disease very much, even if we do not obtain a perfect cure. Under the article DIGESTION, we have given an account of that process, and therefore shall only say here, that a great quantity of food taken in, to which people are tempted by the variety set before them, and by the arts of cookery, is more than the gastric juice can act upon; and that the food not acted upon loads the stomach; that a great deal of air is extricated from the fermenting mass, that the gastric juice is unable to check this fermentation as it does in proper digestion, and the flatus and distension thus produced give rise to many dyspeptic symptoms. Many articles of food are of an indigestible or difficultly digestible quality, independent of quantity; thus, oil, butter, pastry, are in general of difficult digestion. Some stomachs are unable to digest certain articles, which others digest without peculiar difficulty; thus, milk, honey, eggs, salmon, cheese, disagree with some. Therefore, in regulating the diet of patients, we must make particular inquiries about their peculiarities and habits in this respect. Various substances not intended for nourishment, when habitually taken into the stomach, weaken its powers, both muscular and solvent, and so give rise to dyspepsia. Among these, we are to reckon many luxuries and indulgences, tobacco, wine, fermented liquors, spirits, opium. From the list of accused articles, we are strongly inclined to except tea and coffee, as they seem by no means to merit the reproaches that have been thrown upon them; but, on the contrary, in the moderate way in which they are generally taken, they appear to be highly beneficial. They do not produce the boisterous exhilaration of intoxicating liquors, and it is therefore not from this quality that they have obtained their general and long-continued celebrity; and nothing but a conviction of their salutary, or at least innocent tendency, would have extended their reputation among the temperate and the virtuous. Spirits, whether raw, diluted with water, or made into punch, are very pernicious to the stomach, and the whole system. Numerous are the train of evils to which they give origin; and dyspepsia is none of the least severe. Some procure intoxication by opium, which in many of its bad qualities resembles strong liquors, producing diseases of the stomach and liver, debility of mind and body; and thus a medicine of the most salutary and useful kind, is perverted to the most injurious purposes. Aromatics and bitters taken too freely produce dyspeptic symptoms; thus highly seasoned food will bring it on. Acescent food, as too much vegetables, or fermented liquor, will do so. Another cause of dyspepsia is frequent vomiting; a person finding his stomach disordered, takes an emetic, and obtains great temporary relief; from this, he is induced to repeat the remedy on the next similar occasion; but the powers of the stomach are thus exceedingly impaired, and the foundation laid for many symptoms of dyspepsia.

The causes of dyspepsia above enumerated, act directly on the stomach; but there are others no less powerful and frequent which act on the whole body. Of these, one of the most noted is a sedentary life. Hence the great frequency of dyspepsia in literary men, and in men of business who are confined the whole day to their desk. By thus intemperately pursuing study, however rapidly at first literary acquirements may appear to be made, in no long time, it is evident that the ends of study are frustrated, and the mind and body, alike depressed, are incapable of any exertion. Depressing passions have a great influence on the digestive powers, and in those who indulge them, dyspeptic symptoms frequently prevail. Cold moist air, when persons do not take proper exercise, is apt to injure digestion. Hence dyspeptic patients are frequently worse in winter.

Cure of DYSPEPSIA. By attending to the circumstances above mentioned, and

avoiding the various hurtful articles of food and modes of living which have been pointed out, much may be done to assist in the cure; whereas, if the causes of the disease continue to act, no advantage is to be expected from drugs. When a person with dyspepsia puts himself under treatment for the disease, the first object is to get rid of any ill-digested or crude matter that the stomach contains; but it is not safe to attempt this by vomiting; it ought rather to be done by purges. If spontaneous vomiting be very violent, it may occasionally be advisable to expedite the evacuation of the stomach by an emetic.

There are certain symptoms which give great uneasiness, and which require to be attended to. Patients are particularly annoyed with the flatulence which attends their disease, and are very urgent to get medicines to dispel it; they should, if possible, bear it for a time, remembering that it is a consequence of their slow and imperfect digestion, and that the relief from flatulence is to be properly obtained by the improvement of their digestive powers. When we must use carminatives or medicines to expel wind, one of the safest is peppermint-water, having a few drops of hartshorn added to a wineglassful of it. Assafetida pills, or the solution of assafetida, may also be employed. The heartburn is to be relieved by absorbents, the cramp by antispasmodics; and when vomiting is very violent, we may be obliged to have recourse to opium by the mouth or by a clyster, or to give a little brandy or strong aromatic tincture, or ten grains of the oxide of bismuth.

The headach which occurs in dyspeptic patients is thought to depend either on a faulty digestion in the stomach, or in the upper part of the bowels. In the first case, the pulse is languid and feeble, but not very frequent, the tongue whitish, and slightly coated; the edges are of a pale red colour. There is indistinctness of sight, a dull pain or weight in the head, attended with some confusion; the patient is slightly giddy, and he is fearful of falling. There is slight nausea, and a sense of irritation in the stomach, a feeling of tightness about the fauces, and a watery secretion from the back part of the mouth. This headach generally occurs in the earlier stages of digestion, and is best relieved by an emetic. The other kind of headach, that arising from bad digestion in the upper part of the bowels, is remarkable for the appearance of brilliant objects before the eyes; there is chillness of the body, and coldness and dampness of the hands and feet; the pain in the head is very severe, attended with a sensation of coldness and tightness of the scalp, slight giddiness, weight, distension and stiffness of the eye-balls. The tongue is usually covered with a yellowish-white fur. The pulse is of the natural frequency, but languid. There is sickness, but seldom vomiting; commonly flatulency, and a sensation of dryness and inactivity of the bowels. A calomel purgative, followed up by compound powder of jalap, or neutral salts, generally relieves this kind of headach. In all complaints of the head, it is of great importance, to be sure, if we can, whether they proceed from sympathy with other organs, or from diseases in the head itself. These last are generally accompanied by plethora, throbbing at the temples, redness of the eyes, and constitutional excitement. An acute fixed pain, with a quick, irritable, and sometimes irregular pulse, indicate great disorder in the head itself. *See* HEADACH, *page* 305.

Another symptom requiring to be palliated, is acidity, and this is to be done by the various substances called absorbents. If patients are costive, we neutralize the acidity by magnesia, which forms a laxative salt with the acid which it meets in the stomach; and if the bowels are too loose, we prefer chalk, which has an astringent effect, by the salt which it forms in like circumstances. Vegetables certainly tend to acidity, but a total abstinence from them is not to be recommended; as a due mixture of well-boiled

vegetables is highly useful. Costiveness is another symptom to be much avoided, as aggravating stomach complaints when they are present, and occasioning them where they are not. To obviate this, patients should take laxative medicines, even every night if necessary, as rhubarb and magnesia, or pills of aloes, or of aloes and colocynth, or the compound pills of rhubarb. In general, the resinous purgatives do better with dyspeptic patients than the saline: though the use of Cheltenham and Harrowgate waters is beneficial to many of them, whether it be owing to the salts in the water, or to the accompanying advantages of air and exercise, combined with temperance and the freedom from their usual cares. Dyspeptic patients should be most pointedly directed, on no account to suffer themselves to go two days without a motion of the bowels, but to take at bed-time some laxative medicine; and, in all probability, the habit of regularity will be in time formed.

In attempting the cure of dyspepsia, we are to give remedies which act on the stomach, or on the whole system. Of those which act on the stomach, the principal are, 1. *Acids*, which in moderate quantity are excellent stomachics; the sulphuric acid much diluted, as ten drops of the *acidum sulphuricum dilutum* of the Edinburgh Pharmacopœia in a glass of cold water twice or thrice a-day, or the elixir of vitriol, in a like quantity. 2. *Bitters*, as the tincture of gentian, a tea-spoonful in a glass of cold water daily; or the decoction of quassia, a small tumbler twice a-day, or the powder of colombo ten grains twice a-day, or the tincture of colombo, a spoonful as often. The only disadvantage attending the use of tinctures habitually, is the danger of inducing a habit of using spirituous liquors, thus demoralizing the character, and ultimately making the stomach complaints worse. Bitters, therefore, should be taken in the least tempting form, as in substance or decoction. Peruvian bark or quinine is one of the best we can employ. 3. *Aromatics*, as pepper, and other spices; but they at last are apt to do more harm than good. 4. *Chalybeates*, or the various preparations of iron. The carbonate of iron, six or eight grains every day, or the sulphate of iron made into pills with the extract of gentian, one grain of the sulphate to four of the extract, may be taken three times a-day. Though these medicines are useful and proper as auxiliaries in the cure of dyspepsia, our chief reliance is to be placed on remedies acting on the system in general. Exercise in the open air is of primary importance; the kind to be regulated by the strength and habits of the patient. Walking on level ground, riding in a carriage, gardening or farming; dancing, from its effect on the spirits as well as the exercise of the body; going on a journey or to a watering place, are various modes, out of which the patient or physician is to choose what is most expedient. Cold bathing by the shower-bath is a good tonic; and it may be proper to accustom the patient gradually to the degree of cold we wish him to be exposed to. Sea-bathing is of excellent tendency.

We are happy to confirm the foregoing observations on Indigestion, published in our first edition, by the results of the extensive experience of Dr. Abercrombie; and from his work on the Diseases of the Stomach, &c. we extract the following rules:—

" I. It appears that the muscular action of the stomach is both more vigorous and more extensive when its contents are in small quantity, than when it is much distended; and if we suppose the fluids of the stomach to be secreted in nearly a uniform quantity, their action must also be greatly regulated by the quantity of matter which they have to act upon; hence the indispensable importance, in dyspeptic cases, of restricting the food to such a quantity as the stomach shall be found capable of digesting in a healthy manner. This is unquestionably the first and great principle in the treatment of indigestion; and without invariable at-

tention to it, no other means will be of the smallest avail.

" II. It appears that various articles of food are of various degrees of solubility in the stomach. When, therefore, digestion is apt to be easily impaired, it will be of the greatest importance, not only to avoid articles which are of difficult solution, but also to avoid mixing various articles which are of different degrees of solubility. Attention to this rule will probably favour in a great measure the process of chymification going on in a regular and healthy manner, by avoiding a state in which the solution of one article may be more advanced than that of another. The articles of most easy solution appear to be solid animal food, and white fish, both plainly dressed; vegetables are less soluble; and, among the articles of more difficult solution, appear to be fatty substances, tendinous and cartilaginous parts, concrete albumen, the epidermis of fruits, and, according to some, mucilaginous and sweet vegetables. From some experiments of Sir Astley Cooper, it is supposed, that the solubility of animal food is in the order of pork, mutton, veal, beef. Articles in small pieces are much more speedily dissolved than in larger, the action being found to begin at the circumference of the portion; and hence the importance of careful mastication.

" III. If digestion go on more slowly, and more imperfectly, than in the healthy state; another important rule will be, not to take in additional food until full time has been given for the solution of the former. If the healthy period be four or five hours, the dyspeptic should probably allow six or seven. The injurious infringement of this rule by a breakfast, a meat lunch, and a dinner, all within the space of seven or eight hours, is too obvious to require a single observation.

" The rules now briefly referred to, I conceive to be of more importance in the treatment of dyspepsia than any means whatever. I believe, that every stomach, not actually impaired by organic disease, will perform its functions if it receive reasonable attention; and when we consider the manner in which diet is generally conducted, both in regard to quantity, and to the variety of articles of food and drink which are mixed up into one heterogeneous mass, instead of being astonished at the prevalence of indigestion, our wonder must rather be, that in such circumstances, any stomach is capable of digesting at all. In the regulation of diet, much, certainly, is to be done in dyspeptic cases, by attention to the quality of the articles that are taken; but I am satisfied that much more depends upon the quantity; and I am even disposed to say that the dyspeptic might be almost independent of any attention to the quality of his diet, if he rigidly observed the necessary restrictions in regard to quantity. It is often, indeed, remarkable, how articles, which cannot be borne as a part of mixed diet, agree perfectly, when taken alone; how a person, for example, who fancies that milk disagrees with him, will enjoy sound digestion upon a milk diet; and how another, who cannot taste vegetables without being tormented with acidity, will be entirely free from acidity on a vegetable diet. The following case occurred to me some time ago, in which this experiment was made in the most complete and satisfactory manner.

" A gentleman, accustomed to moderate, but very comfortable living, had been for many years what is called a martyr to stomach complaints, seldom a day passing in which he did not suffer greatly from pain in his stomach, with flatulence, acidity, and the usual train of dyspeptic symptoms; and, in particular, he could not taste a bit of vegetable, without suffering from it severely. He had gone on in this manner for years, when he was seized with complaints in his head, threatening apoplexy, which, after being relieved by the usual means, showed such a constant tendency to recur, that it has been necessary ever since

to restrict him to a diet almost entirely of vegetables, and in very moderate quantity. Under this regimen, so different from his former mode of living, he has continued free from any recurrence of the complaints in his head, and has never been known to complain of his stomach.

" In the regulation of the diet for all affections of the stomach, however, strict attention must always be paid to the nature and source of the disease. Animal food is, in general, the most digestible; but there are many cases which depend upon an irritable state of the mucous membrane, in which the diet found to be beneficial, or even necessary, is one restricted to farinaceous articles and milk. The higher degrees of this affection, in which the disease amounts to inflammation of the mucous membrane, have already been referred to; but there appear to be modifications of it, which, without assuming this formidable character, have a similar effect on the functions of the stomach, and require similar treatment, especially in regard to diet. The subject is one of great interest, and opens a most important field of observation to him who, renouncing a mere empirical treatment of dyspeptic affections, shall direct his attention to the important varieties in the nature and source of the disease. Such a person will be astonished to find the improvement which is made in certain cases, under a diet restricted entirely to rice, arrow-root, or bread and milk, with total abstinence from all stimulating liquors, after the patient had spent years of wretchedness upon animal diet, with wine or brandy and water, and the usual round of stomachic remedies. Other cases again agree better with animal diet in very small quantity, and the moderate use of stimulating liquors. The diagnosis is often difficult, and must be guided more by the judgment and attention of the practitioner, than by any general rule. This subject has been well illustrated by Dr. James Johnson, in his treatise on Morbid Irritability of the Stomach.

" In the medical treatment of dyspeptic complaints, it is impossible to advance any thing new. One thing, however, has always appeared to me to be of the utmost importance in regard to the regulation of the bowels, which, in general, are habitually slow. It consists in regulating them by the daily use of very small doses of laxatives combined with tonics; so as, without ever purging, to imitate at all times, that moderate but regular action, which constitutes the most healthy state of the bowels. For this purpose various combinations will be found to answer; such as columbo powder with carbonate of potass, and a few grains of rhubarb, taken once or twice a-day; sulphate of iron with aloes; sulphate of quinine with aloes; oxide of bismuth with rhubarb or aloes, &c. Lime-water is often useful, and the mineral acids. The nitric acid, in particular, is often found one of the best tonics, and one of the best correctors of acidity.

" This kind of mild treatment, with a proper regulation of diet, and regular exercise without fatigue, appears to be the plan best adapted to the ordinary cases of dyspepsia. Injury is done by the free use of stimulants, and by active purging; and I must also express my apprehension that no small injury is done by the indiscriminate use of mercury. There are, indeed, some affections of the stomach, probably connected with derangements of the liver, in which a very cautious use of mercury appears to be beneficial; but in many others, it is decidedly hurtful; and I conceive, that in all disorders of the stomach, mercury in any form, or in any quantity, ought not to be employed when the desired effect can be accomplished by any other means." (Dr. Abercrombie *on Diseases of the Stomach, Intestinal Canal*, &c.)

Dr. Paris, who has written a useful and intelligible work on Diet, lays down the following rules for patients troubled with indigestion.

" The dietetic code of the dyspeptic patient may be summarily included under the following precepts:—

" A. *Precepts in relation to the* QUALITY *of Food.*

a. Animal food is more digestible, but at the same time more stimulant and less flatulent, than vegetable diet. A dyspeptic invalid may be restricted to meat and bread with advantage, until his digestive powers have gained sufficient energy to enable him to convert vegetable matter into healthy chyle; after which, a due mixture of both species of aliment will be essential.

" *b.* The wholesome quality of food depends as much, or even more, upon its mechanical condition, than upon its chemical composition; and as this is influenced by various circumstances under our own control, we may render food, naturally indigestible, of easy digestion. The digestibility of any species of aliment, as well as its nutritive qualities, are influenced by the different modes of cookery. The addition of condiments is also capable of producing the same effects. *See the articles* DIET *and* DRINK *in this work.*

" B. *Precepts in relation to the* QUANTITY *of Food.*

" This must, in every case, be regulated by the feelings of the patient: let him eat slowly, masticate thoroughly, and, on the first feeling of satiety, dismiss his plate, and he will not have occasion for any artificial standard of weight and measure. But he must, in such a case, restrict himself to one dish; an indulgence in variety provokes an artificial appetite, which he may not readily distinguish from that natural feeling which is the only true indication.

" C. *Precepts, with regard to the* PERIODS *best adapted for Meals, and on the Intervals which should elapse between each.*

" I have, upon every occasion, endeavoured to impress upon the practitioner, the high importance of these considerations. In every situation of life, we too frequently pass unheeded, objects of real importance, in an over-anxiety to pursue others of more apparent, but of far less intrinsic value; so is it with the dyspeptic invalid in search of health: What shall I eat? Is this or that species of food digestible? are the constant queries which he addresses to his physician. He will religiously abstain from whatever medical opinion or even popular prejudice has decried as unwholesome; and yet the period at which he takes his meal is a matter of comparative indifference with him: although he will refuse to taste a dish that contains an atom of vinegar, with as much pertinacity as if it held arsenic in solution, he will allow the most trifling engagement to postpone his dinner for an hour. So important and serious an error do I consider such irregularities, that I have frequently said to a patient labouring under indigestion. " *I will wave all my objections to the quality and quantity of your food, if I were sure that such a sacrifice of opinion would ensure regularity in the periods of your meals.*"

" *a.* The principal solid meal should be taken in the middle of the day.

" *b.* Four hours after which, a liquid meal should be indulged in.

" *c.* The digestion of one meal should be always completed before fresh labour is imposed upon the stomach.

" *d.* The intervals at which food is to be taken, must be regulated by the digestive powers of the individual, and the rapidity with which they are performed.

" *e.* The patient should never take his meal in a state of fatigue.

" *f.* Exercise should always be taken, three or four hours after dinner." (DR. PARIS *on Diet.*)

In concluding this article, we are anxious to inculcate, that exercise and temperance are at once the great preventers and curers of indigestion. They, who in their extreme anxiety to fit themselves for the duties of a learned profession, imprudently overstrain their powers, and neglect that exercise which nature requires, should be warned by the sad experience of others to reflect, that such ill-timed avarice of learning may lay the foundation of long and painful

disease; and when their talents and acquirements have placed them in stations of usefulness, they may be, from languor, pain, and weakness, utterly incapable of discharging their duties. It is only by a due mixture of study and relaxation, of mental diligence and bodily activity, that we can hope to obtain the sound mind in the sound body; which, when directed by true principle, in whatever profession, can alone make us useful to ourselves or beneficial to others. As for those who, in the pursuit of gain, sacrifice to it their health as well as their peace, we cannot but deplore that melancholy aberration of mind so frequently met with, by which men mistake the means for the end; and which impels them to procure ample materials for the ease and enjoyment of life, while their enfeebled powers preclude the possibility of using the wealth they have acquired with so much solicitude.

STOMACH, INFLAMMATION OF. The symptoms of inflammation of the stomach are, acute pain, heat, and tension in the region of that organ, great increase of pain when any thing is swallowed, vomiting, great and sudden depression of strength, a small pulse, thirst, restlessness, anxiety, continual tossing of the body. As the disease increases, there is great loss of strength, faintings, short respiration, clammy sweats, hiccup, coldness of the extremities, an intermitting pulse, death. Inflammation of the stomach is always to be regarded as a very dangerous disease.

Causes. It arises most frequently from matters introduced into it, either inflaming or irritating from their poisonous and acrid character; or from the previous state of the stomach being unfit for their reception, as when cold water is swallowed when the body is much heated. It rarely, if ever, occurs spontaneously or from constitutional causes.

Treatment. The first remedy to be tried is blood-letting, to a considerable extent; and we must not be deterred by the smallness of the pulse. If, by this means, we render the stomach able to retain what is swallowed, we are to give purgatives of the mildest kind, as castor oil; to apply a blister to the pit of the stomach, and afterwards to give sudorifics to determine to the skin. The food should be in small quantity, and of the mildest nature; and after the inflammation is subdued, the strength must be recruited by tonics and nourishing diet, taking care for a long time not to eat any thing acrid or difficult of digestion.

STOMACH-PUMP. An instrument for speedily evacuating fluids upwards from the stomach. On this subject we beg to quote the following remarks from Dr. Paris's Pharmacologia, where he is speaking of antidotes: "The practice of emptying the stomach by means of a syringe, as proposed by Boerhaave, has lately been revived, with all the confidence of a *new* invention. There are cases of narcotic poisoning, in which there can be no doubt it would furnish the practitioner with a valuable resource; but I much fear that it will be found to be less successful than its more sanguine advocates have anticipated; for where the stomach has so far lost its power, as to be insensible to the stimulus of a potent emetic, the chances of recovery are small; the practice, however, in such cases, ought never to be neglected, for it cannot possibly do harm, and may perhaps be beneficial."

STOMACH, ULCERATION OF. There are some severe and fatal cases of diseased stomach from organic derangement, during the progress of which, the most prominent symptoms resemble those of indigestion. "This organic disease exists in two conditions; namely, chronic inflammation of a defined portion of the mucous membrane of the stomach, or the mucous follicles; and the termination of this by ulceration. In both these conditions, it may probably be the subject of medical treatment; for we have reason to believe, that the inflammation may be arrested and prevented from passing into ulceration, and that the ulceration may

heal before it has become connected with any permanent change in the organization of the part. Hence appears the importance of minutely watching the progress of the disease in its early stages, in which only it is likely to be treated with success. The difficulty here is in the diagnosis; the disease often assuming the character of a mere dyspeptic affection through a great part of its progress; while, in fact, a morbid condition of a very serious nature is going on, which would require treatment in many respects very different from that adapted to dyspepsia.

"The disease may be suspected, when there is pain in the stomach occurring with considerable regularity immediately after meals, and continuing for a certain time during the process of digestion, especially if the pain be distinctly referred to a particular spot, and if there be at that spot tenderness on pressure. It may be farther suspected, if the pain continues severe until the patient is relieved by vomiting; but we have seen that the disease may go on to a very advanced period without vomiting; and, on the other hand, that it is sometimes indicated by vomiting occurring occasionally, without any regular periods, and with very little pain. When this feeling occurs with great intensity after food of all sorts, taken even in the most moderate quantities, we have reason to suspect disease of the mucous membrane of the stomach. The feeling appears to be in some cases connected with the formation of an acrid fluid, which we often see brought up in considerable quantities; and in others, seems to depend merely upon the morbid condition of the mucous membrane itself; in consequence of which, ordinary articles produce that peculiar feeling of irritation, which in the sound state of the parts is produced by matters of an acrid quality. It is common to hear such patients say, that attention to diet makes little difference in their feelings, but that every thing turns immediately to intense acidity, even a bit of meat or a glass of cold water. The disease may be also suspected, when, along with any of the above-mentioned symptoms, though in a mild and obscure form, the patient is becoming weakened and emaciated in a manner which a mere dyspeptic affection could not account for. The affection, again, is sometimes accompanied and characterised by a raw and tender state of the tongue and throat; in some cases, with minute ulcers, and in others, with the formation of slight aphthous crusts. One gentleman lately stated to me that his complaint began with minute ulcers and a burning sensation on the tongue, and that he afterwards distinctly felt the same state of disease extending gradually along the œsophagus, and at last into the stomach.

"Amid such a diversity of symptoms as occur in connexion with this disease, our chief reliance in the diagnosis must probably be on a careful examination of the region of the stomach itself, with the view of discovering the existence of tenderness referred to a particular part. This examination should be made with the most minute attention, at various times, both when the stomach is full and when it is empty. If induration be discovered, the character of the case will be obvious; but we have seen, that most extensive ulceration may exist without any induration; and likewise, that extensive induration may exist without being discovered by external examination.

"There are other important cautions with regard to the diagnosis. In particular, we should not be deceived, either by the pain having remarkable remissions, and the patient enjoying long intervals of perfect health, or by remarkable alleviation of the symptoms taking place under a careful regulation of the diet; for these circumstances we have found occurring in a very striking manner, while the disease was making progress to its fatal termination.

"When the disease is detected at an early period, the treatment must consist chiefly of free and repeated topical bleed-

ing, followed by blistering, issues, or the tartar emetic ointment. The food must be in very small quantity, and of the mildest quality, consisting chiefly or entirely of farinaceous articles and milk, with total abstinence from all stimulating liquors; and it would appear to be of much consequence to guard against any degree of distension of the stomach, that can possibly be avoided even by the mildest articles. The patient should abstain, in a great measure, from bodily exertions, and hence the importance of endeavouring to distinguish the disease from mere dyspepsia, as the regimen and exercise which are proper and necessary in a dyspeptic case, would, in this case, be highly injurious.

"In the early stages, little probably is gained by medicine given internally, beyond what is required for the regulation of the bowels. In the more advanced stages, or when there is reason to suspect that the disease has passed into ulceration, the same observations will apply in regard to external applications and regimen; and benefit may now be obtained by some internal remedies, such as the oxide of bismuth, lime-water and nitric acid; and, in some cases, small quantities of mercury appear to be useful. Small opiates, combined with articles of a mucilaginous nature, appear frequently to be beneficial; likewise articles of an astringent nature, such as kino, alum, and the rhatany root. The arsenical solution has also been recommended, and small doses of the nitrate of silver; and in several instances in which I suspected this disease to be going on, I have found remarkable benefit from the sulphate of iron. Whether the disease can be cured, after it has advanced to ulceration, must indeed remain in some degree a matter of doubt; because, in a case which has terminated favourably, we have no means of ascertaining with certainty that ulceration had existed. In some of the cases, however, which have been described, we have seen every reason to believe that some of the ulcers had cicatrized, though the disease had afterwards gone on to a fatal termination; and from what we observe in the intestinal canal, we can have little doubt that simple ulceration of the mucous membrane may cicatrize. I am satisfied that I have seen the cicatrices of such ulcers when the patient has died of another disease, after having been for a considerable time free from any symptom in the bowels." (Dr. Abercrombie *on Diseases of the Stomach and Intestinal Canal.)*

STOMACHICS. A term used to denote those medicines which are believed to be beneficial to the stomach, and to promote the powers of digestion. This is a vague term, and is rather used in popular discourse, than by medical writers, who prefer more appropriate and definite terms, as bitters, tonics, aromatics, &c. Pepper, ginger, and various condiments, may be reckoned stomachics; rhubarb is a very good one; and the compound pills of rhubarb, aloes, and myrrh, are often called stomachic pills. Two may be taken every day for some time.

STONE and GRAVEL, are the names applied to the diseases which are occasioned by concretions in the urinary passages. Gravel signifies small stones that pass from the kidneys through the ureters in a few days; hence the disorder induced in such cases is called a *fit* of gravel. Stone is a calculous concretion in the kidneys or in the urinary bladder, which is too large to pass, or at least, without great difficulty. The symptoms to which such concretions give rise are of the most painful kind, and occur so frequently, as to become objects of very considerable interest. There are so many different salts contained in the urine, that it does not appear wonderful that occasionally they should fail of being kept in complete solution. When this is the case, and when a nucleus is formed, they concrete around it, and by their getting through narrow passages, or pressing upon delicate organs, they occasion the severe symptoms of stone or gravel. A *Fit of the Gravel* is accompanied by a fixed

pain in the loins, a numbness of the thigh on the side affected, sickness and vomiting, and sometimes slight diminution of the quantity of urine. Sometimes the acuteness of the pain occasions faintings and convulsive fits. These violent and painful affections are generally terminated by the passage of small stones through the urethra; and the patient is for the time easy. In those who are much predisposed to gravel, these attacks may be expected again, at uncertain intervals.

When there is *Stone in the Bladder*, the symptoms are, a frequent inclination to make water, which flows in small quantity, and is often interrupted; and there is generally pain at the extremity of the passage, especially as the last drops are expelled, and for some time afterwards. Rough and violent motion excites a good deal of pain; exercise, and especially riding, brings on bloody urine. There is also a dull pain about the neck of the bladder, frequent desire to go to stool, a sense of weight or pressure at the lower part of the pelvis; and a quantity of mucus is mixed with the urine. The pain is not in proportion to the size of a stone; sometimes very small stones excite violent pain, while large ones occasion little inconvenience. The pain is by no means constant, but comes on in violent paroxysms, in the intervals of which the patient is perfectly easy. In many instances, the patient can lie most easily on one side, and when he turns to the other has the sensation of a weight rolling to the opposite side. These symptoms give pretty certain indication of the existence of a stone in the bladder; but it is put out of doubt only by the introduction of a sound, or catheter, into the bladder, which, on striking the stone, imparts a certain feeling to the hand of the surgeon. Sometimes a small stone eludes the instrument; sometimes by getting into folds, or pouches, it cannot be discovered by the catheter.

Causes. The period of life from infancy to about fifteen years, is that most subject to the formation of urinary calculi; and it is said that the children of the poor are most liable to be afflicted with this disease. It occurs also in old persons who have been used to a sedentary life. Foreign bodies getting into the bladder have become the nucleus of a stone. Some constitutions more than others seem disposed to the formation of gravel; and particularly in gouty families, it is observed, that while the males are liable to the pain and swelling of the extremities, the females are subject to calculous affections. Certain states of the stomach and digestive organs seem to give a tendency to the formation of calculi; and these are the cases which are most benefited by the use of alkalis, lime, and magnesia.

Treatment. It is now admitted that it is difficult, if not impossible, for any medicine taken by the mouth to reach the kidneys and bladder so much unchanged, as to dissolve the stone or calculous matter; and any good that appears to have been done by such medicines, has been owing to their preventing the formation of the acid, which in many cases is somehow or other connected with stone. The medicines proper in gravel are such as the following: fine soap, as containing carbonate of soda, may be given in the form of pills, ten grains twice a-day; the solution of potash to the extent of ten drops may be given in a little broth, and the dose gradually increased: soda-water, or as it is commonly called in the shops, aërated alkaline water, to the extent of four ounces three times a-day. Magnesia has also been found to be a medicine of considerable service in that species of calculous disease, dependent on the formation of uric acid. When the pain is violent, fomentations are to be applied externally; and by the use of emollient clysters, an internal fomentation is applied. The warm bath also may be used; and, to prevent or remove inflammation, leeches may be applied to the region of the kidneys. An opiate also may be at times necessary. From their tendency to act on the urinary organs, blisters are

improper; and no diuretic of an irritating nature, as oil of juniper or turpentine, should be employed. The diet of persons subject to gravel should be much attended to. Their food should be light and nourishing; they should avoid wines containing much acid, and abstain from acids in general.

We have mentioned under LITHONTRIPTICS, the method of attempting relief for the stone by internal remedies; but when a stone is fairly formed, all such means are likely to be unavailing; and a surgical operation is the only resource. About no operation has there been more discussion than about this; the place for performing it, the manner, and the instruments, have been varied repeatedly, and the descriptions and arguments respecting them, have furnished materials for many volumes. The operation of lithotomy consists in making an incision into the bladder, and bringing out the stones, whether one or more, by the fingers, by a scoop, or by forceps. As we despair of being able to give any such description as would be intelligible to the general reader, we must refer those who are curious on the subject, to books of surgery.

Though the patient may be relieved and recover well after the operation, yet if the tendency in the constitution to form stone is strong, other calculi may succeed, and occasion a renewal of his sufferings.

STONE-FRUITS A considerable variety of these are eaten, and are highly agreeable; but experience has proved them to be less easy of digestion than other species of fruits. The ripe peach is very delicious, and pretty easy of digestion; but the pulp of plums and cherries is often managed by the stomach with much difficulty; and we are to judge whether they are allowable to any particular patient or not, by his digestive powers with respect to the formation of acids. Much of the bad character of stone-fruits has been owing to their being taken when unripe.

STOOLS. The discharge from the body by stool has a certain appearance in health perfectly well known, and any deviation from this appearance is considered as an indication of something wrong in the digestive functions. But various substances taken by the mouth have the power of altering the appearance of the stools, without producing any very bad consequences on the digestive powers. The stools also are changed in their colour by the action of the air, especially those of infants, which change so often from yellow to green; and therefore the excrement should be examined almost as soon as passed. Spinage tinges the stools green, and a great quantity of milk will render them pale-coloured; where the food has been very various, the stools will appear mixed; and after much perspiration, long fasting, or strong liquors, the stools appear very hard. The skin and seeds of fruits are seen entire in the stools, and sometimes aliments get very hard, and pass undigested; this is the case with cheese, curd, and oat-seeds. Certain medicines often have a very conspicuous effect on the stools; iron renders them black, and magnesia gives them a whitish appearance. The appearance of the stools in jaundice being pale and clay-coloured, from the want of bile, is one of the most remarkable symptoms of that disease. *See* COSTIVENESS, *and* PURGATIVE MEDICINES.

STORAX. A gum from the *Styrax officinalis*, formerly used in medicine as a stimulating expectorant, but now quite neglected.

STRAMONIUM. The name now in general use for the *Datura Stramonium*, or *Thorn-Apple*, a plant having narcotic properties, very poisonous when taken in an over-dose; and which has of late years been much extolled for its virtues in asthma, when smoked like tobacco. The leaves and the lower part of the plant are thus used; the patient falls asleep, and awakens recovered from the paroxysm. In some cases, a perfect cure is effected; but in general the relief is only temporary.

Dr. Bree, who writes on disordered Respiration, says that the indiscriminate use of the smoke of stramonium has occasioned dangerous and hurtful effects in frequent instances. In some cases of aged or apoplectic subjects, death has been the consequence. In chronic diseases, attended with acute pain, the extract, from an eighth of a grain to a grain, is said to lessen powerfully, and almost immediately, sensibility and pain; but its place may well be supplied by more safe narcotics.

STRANGURY signifies a frequent desire of making water, attended with much difficulty and pain in voiding it. It arises from various causes, as inflammation of the urethra, of the neck of the bladder, or other neighbouring parts, the application of a blister when the matter of the cantharides is taken into the body, the internal use of cantharides in powder or in tincture, excess in drinking vinous or spirituous liquors, or from gravelly particles in the passage. It is sometimes a symptom of gout, and very often arises from disease of the prostate gland. When strangury is owing to the application of a blister, the patient should drink plentifully of diluent liquors, as barley-water or thin gruel, to which a little nitre or other diuretic medicine may be added. In severe cases, fomentations to the urethra and neighbouring parts may be required; and it will be proper to use clysters to evacuate the bowels, as the accumulation of feculent matter must increase the strangury, from whatever cause it originates. If the strangury is an attendant on inflammation of these parts, it must be treated by local blood-letting, by leeches, by cooling purgatives, by fomentations; and if from spasm, an opiate by the mouth or by clyster, will be proper. If the strangury proceeds from organic disease, it must be the business of the surgeon to ascertain the cause, and to apply the proper remedies; while care must be taken not to add to the disease, by the use of improper drinks or articles of diet, as harsh wines, acrid salts, aromatics, or the like.

STRAWBERRY, *Fragaria vesca.* A very pleasant fruit, laxative and cooling when taken in moderation, but, like other vegetables, to be avoided by weak and acid stomachs.

STRICTURE. A contraction of the diameter of any passage, most generally applied to such contractions of the gullet and of the urethra. *See* GULLET *and* URETHRA.

STRYCHNINE *or* STRYCHNIA is an alkaloid discovered in several species of *Strychnos,* as the *Strychnos Nux-vomica, S. Sancti Ignatii, S. Colubrina,* and *S. Tieuté,* which yields an Indian poison, the Upas Tieuté. "Strychnine has an intensely bitter taste, which is perceptible, it is said, when a grain is dissolved in eighty pounds of water. It is very sparingly soluble in water, but easily soluble in alcohol and the volatile oils. Except the prussic acid, no poison is endowed with such destructive energy as the strychnia. There is little doubt that half a grain thrust into a wound might kill a man in less than a quarter of an hour. It acts in whatever way it is introduced into the system, but most energetically when injected into a vein. The symptoms produced are very uniform and striking. The animal becomes agitated and trembles, and it is then seized with stiffness and starting of the limbs. These symptoms increase, till at length it is attacked with a fit of violent general spasm, in which the head is bent back, the spine stiffened, the limbs extended and rigid, and the respiration checked by the fixing of the chest. The fit is then succeeded by an interval of calm, during which the senses are quite entire. But another paroxysm soon sets in, and then another, till at length a fit takes place, more violent than any before it; and the animal perishes suffocated. The first symptoms appear in sixty or ninety seconds when the poison is applied to a wound.

Precisely the same symptoms are produced by the nux-vomica; half a drachm of the powder killed a dog in forty-five minutes, and a grain and a half of the al-

coholic extract thrust into a wound, killed another in seven minutes. The cause of death appears to be prolonged spasms of the muscles of respiration; the diaphragm partakes in the spasm of the external muscles.

Strychnine and the alcoholic extract of the nux-vomica have been used for the cure of diseases of debility, for palsies, and amaurosis. The commencing dose is half a grain of the extract in the evening, formed into a pill, and gradually increased to four or six grains. Of strychnine, the dose is one-twelfth of a grain, or six drops of the tincture." (Dr. Christison.)

STUPE. A piece of cloth, usually of flannel, dipped in a fluid, and applied to an affected part.

STUPOR. The deep sleep or insensibility which accompanies many disorders of the head.

STYE. A little swelling on the eye-lid, or a boil projecting from the edge of the eye-lids, generally near the corner of the eye. It is of a dark-red colour, much inflamed, and a great deal more painful than might be expected from its size. This is owing to the violence of the inflammation, to the sensibility of the part inflamed, and to the stretching of the dense skin in that part. A stye often excites general fever in delicate and irritable habits. It is best for a stye to suppurate, and discharge the matter, and the dead slough connected with the abscess; and an emollient poultice should be laid on, inclosed in a bag, and frequently renewed, till the matter points and is discharged by a free vent. It may be prudent in some cases to let it out by an opening with a lancet, and this should be done on the inner side of the eye-lid. Gentle pressure may be necessary, and when the matter is out, the part heals very quickly. Some people are very often troubled with the stye; and that seems in many cases to be connected with a disordered state of the stomach and bowels; and often with irregularity and intemperance in eating and drinking. Sometimes a hard swelling remains on the eye-lid, occasioning deformity, and requiring to be removed by a small surgical operation.

STYPTIC. An application having the power of corrugating, or causing to shrink; generally made of some astringent or corroding liquor, as turpentine, or a solution of blue or white vitriol or alum. A styptic wash is used to stop the bleeding from surfaces where there is no large vessel.

SUBCUTANEOUS, immediately under the skin.

SUBLUXATION, a sprain.

SUBMURIATE OF MERCURY, a name for Calomel. *See* Calomel.

SUBSULTUS TENDINUM. The Latin term for that twitching and starting of the tendons which takes place at the close of bad fevers, and from wounded tendons.

SUCCORY, *Cichorium Intybus*, a plant of which the decoction is slightly purgative; it is now hardly used.

SUDORIFICS are those medicines which increase the exhalation by the skin in such quantity that it appears on the surface in a liquid form. Diaphoretics are those which promote the same discharge, but in smaller quantity and more gradually, when it passes off into the air in the state of vapour. The state of the atmosphere with respect to moisture or dryness has much influence on the apparent quantity of our perspiration. When the air is loaded with moisture, the perspirable matter is not carried off, and collecting about the body, we appear to be drenched in perspiration; while in the dry and keen air, when the wind is from the north or east, even much exercise will not produce sensible perspiration, though the actual exhalation from the skin is taking place in very great quantity. Sometimes the perspiration may be diminished by too great action of the heart and arteries, at other times by debility of the system, and a slow and languid circulation.

As the perspiration is obstructed by very different causes; so, very different

means may act as sudorifics. Sudorifics may act by stimulating the skin, or by increasing vascular action, or by removing that constricted state of the vessels of the skin which is the consequence of too violent action of the heart, and of the increased heat of the system. 1. Of the first kind of sudorifics, or those which promote sweat by stimulating the vessels of the skin, are external heat, friction, or medicines which, taken into the circulation, exert their influence on the skin, as mercurial medicines and sulphur, or those which being applied to the stomach act on the skin by its sympathy with that organ: thus cold drinks sometimes prove powerful sudorifics. 2. By increasing the general action of the vascular system, sweating is produced, as we see by the use of the warm bath, violent exercise, and certain substances swallowed, as alcohol, ammonia, and guaiac. 3. Those means which relax the constriction of the perspiring vessels, are antimonial medicines, the cold affusion, and saline diaphoretics.

A consideration of the way in which various remedies act in producing sweat, will lead us to those which are proper in various diseases. Thus we should not prescribe opium and its combinations when we wish to produce sweating in fever, or at the commencement of eruptive diseases; but should rather use the saline diaphoretics, as solution of acetate of ammonia, called Spirit of Mindererus, or the citrate of potassa in the form of effervescing draughts. Almost all sudorifics require to be aided in their operation, by the plentiful use of warm or tepid diluents, as gruel, barley-water, tea, or the like. In rheumatism, sweating is one great means of cure, but it is generally proper to begin with blood-letting. *See* DIAPHORETICS, PERSPIRATION, *and* RHEUMATISM.

SUFFOCATION is the extinction of life by the function of breathing being violently stopped. This may happen from hanging and drowning; from blood or matter bursting from the lungs into the branches of the wind-pipe; from inflammation or croup, producing a false membrane or obstructing mucus in the air-passages; from foreign bodies sticking in the same; from large pieces of meat in the gullet pressing on the back of the wind-pipe; and many similar incidents. Where the suffocation is complete, nothing can be done; but where it is only threatened, the proper means of relief are to be had recourse to, varying, of course, according to circumstances. Foreign bodies are to be extracted, if possible, from the wind-pipe; and vomited from the gullet, or pushed down into the stomach; and the means for restoring suspended animation to be employed in the case of hanging and drowning. *See* DROWNING.

SUFFUSION. When fluids are poured out from their proper vessels, but remain under the skin, they are said to be *suffused*. Thus blood or lymph may occasion a *suffusion* of the eyes; and the term is often used when the blood-vessels are merely distended, producing a dull redness of that part of the eye which is usually white. It is a symptom of various feverish disorders; and often a sign of coming delirium. The blindness from palsy of the optic nerve or of the retina, commonly called, by medical men, *amaurosis*, was anciently believed to be owing to the pouring out of certain fluids, and obtained the name of *suffusio nigra*.

SUGAR. A well known substance obtained by boiling the expressed juice of the sugar-cane, which grows in both the Indies, and is particularly cultivated in the West Indies. The portion of the juice which crystallizes is called raw sugar, and that which does not crystallize is molasses. Raw sugar is refined by certain processes, and is then loaf or lump sugar. Sugar is very nutritive, as is seen by the improved health and fatness of the negroes in crop-time; though in Europe it is not used as an article of diet, but as a condiment. In pharmacy, it is used to form syrups, and to disguise the taste of nauseous medicines. Molasses answer these purposes very well.

The coarser kinds of sugar are slightly purgative.

SUGAR OF LEAD. The compound of acetic acid and lead, so called from its sweet taste. It is of great use as an external application in inflammations, bruises, and diseases of the skin. It is generally applied in solution by means of cloths soaked in it, or mixed with crumb of bread. A drachm to five ounces of water is a strong solution, and with double that quantity of water a weak one. A little vinegar should be added, if the water be not quite pure. It is thought that the value of the applications of lead in common inflammation, arises from a partial palsy of the nerves of the part, produced by the sedative power of the lead. It should not be applied to recent wounds, nor to ulcers where there is much debility or any tendency to gangrene. Though the internal use of the salts of lead is a circumstance attended with very considerable danger, yet, under careful management, the acetate of lead given internally has been found a very valuable and manageable remedy, especially in hæmorrhagy from the lungs and uterus, and from the bowels. The diarrhœa which attends the closing stage of consumption has been greatly mitigated by its use. The dose is from half a grain to a grain, with half a grain of opium; and it is recommended that nothing but a little cold water, or vinegar and water, be swallowed for at least an hour after the pill is taken. Sugar of lead with lard, forms an excellent cooling ointment.

SUGARED PLUMS. This article is mentioned here, merely for the sake of observing, that by Dr. Paris's account, those sweetmeats sold to children often contain a great deal of sulphate of lime (stucco,) which being insoluble, must be dangerous if it accumulates in the bowels.

SULPHATES are neutral salts composed of sulphuric acid, and an alkaline, earthy, or metallic oxide base. There are several sulphates of great importance in medicine, as the sulphate of soda (Glauber's salt,) and the sulphate of magnesia (Epsom salt.) An account of these has been given under their common names; and the next two articles relate to two of the metallic sulphates, which are useful in the practice of physic and surgery.

SULPHATE *of* COPPER, *Blue Vitriol* or *Blue Stone*, is used as an escharotic, to destroy proud flesh, or to induce a better action on diseased surfaces. It is given internally as a violent emetic, in cases where poison has been swallowed, and where it is desirable to empty the stomach very quickly. The dose for this purpose is five grains; but as it is itself poisonous, it should not be resorted to, if we suspect the stomach to be in any degree insensible, and likely to retain it too long. We should rather employ the article next mentioned.

SULPHATE *of* ZINC, *White Vitriol*, is principally used as an astringent wash, in whites; and for eye-water, in the proportion of two grains to the ounce of water; and as an emetic, very speedy in its operation, and, therefore, useful when vegetable poisons have been swallowed. The dose for this purpose is thirty grains. In spasmodic coughs, it is given with very good effect, combined with camphor and myrrh; and it is said that various quack medicines for the cure of hooping-cough are composed of sulphate of zinc. The dose for this purpose is from one to two grains daily. In complaints of the chest, with great expectoration, the same has done good when given in the form of lozenge. It does not possess so complete sedative powers as the sugar of lead, when applied in solution to inflamed surfaces.

SULPHUR. An inflammable substance found in volcanic countries. Sulphur, or brimstone, as it is generally called, is procured in the form of cylinders, and in fine powder. It has neither taste nor smell; but when rubbed it has a faint peculiar odour. It is of a yellowish colour; but when procured by precipitation it is white, probably owing to its containing water. It is purified by sublimation; and when thus purified, it is

called flowers of sulphur, in which form it is used as a mild purgative, which purpose it completely answers. The dose is about one or two drachms. It may be given in syrup, treacle, or conserves; and when combined with an equal portion of cream of tartar, it forms one of the mildest and best laxatives for those who are troubled with piles. Sulphur has long been famous for its power of curing diseases of the skin, and for being a specific in the itch. For this purpose, it is applied in the form of ointment; the sulphur being mixed with some greasy substance, and rubbed over the parts affected, or as much of them at a time as may be judged proper. At the same time, the patient may take a little sulphur internally. The rubbing for the itch may be continued for four or five days, when the disease is commonly removed. There are great popular apprehensions about exposure to the air when using sulphur. It no doubt shows itself to pervade the pores of the body, by the smell it exhales, and by blackening silver in the pocket; but while under its influence, there is no more needed, than the usual precautions against taking cold. Sulphur is a favourite remedy with the common people in measles, and other eruptive diseases. It is very harmless; and may, by acting gently on the bowels, be of some service in the commencement of these diseases, though it will not answer the purpose for which they intend it, that of bringing out the eruption more speedily and completely. Sulphur counteracts the activity of mercury, and should, therefore, never be used to assist the apothecary in extinguishing it, in order to make the blue ointment.

SULPHURIC ACID. The acid composed of sulphur and oxygen, obtained by burning sulphur in the presence of oxygen gas. It is commonly called *Oil of Vitriol.* It is possessed of highly corrosive qualities; but when properly diluted, it is a very useful cooling and astringent medicine. It is kept in the shops diluted with seven times its weight of water; and of this diluted acid, ten drops in a glass of cold water may be taken twice a-day, in discharges of blood from the stomach or lungs. Or it may be mixed with simple syrup, or syrup of Tolu, in the proportion of one drachm of the acid to four ounces of syrup, and the patient's drink may be acidulated with the mixture. To prevent it from injuring the enamel of the teeth, it may be sucked through a quill, and the mouth must be carefully washed after taking it. The infusion of red rose leaves, acidulated and coloured red by this acid, is an elegant form for administering it, either internally or as a gargle.

When sulphuric acid has been swallowed by mistake, the consequences are inflammation of the stomach, and all its attendant dangers and sufferings. Little can be done, but we may try large dilution with carbonate of potash dissolved in warm water, and then endeavour to excite vomiting by irritating the fauces with a feather, or by thrusting a finger down the throat. The after-treatment must be directed by the symptoms.

SUPPER. The meal taken just before going to bed. As the powers of the body, and digestion among the rest, are diminished in their activity during sleep, it is an unsafe measure to load the stomach at bed-time with a large quantity of various kinds of food. When this is done, there is great distension both from the load thrown in, and from flatulence; the person is liable to be disturbed with restlessness, or nightmare, and frightful dreams. A slight and moderate repast only is allowable; an egg, or some preparation of milk, or oatmeal pottage, which last, however, is apt to become sour on some stomachs. For dyspeptics, suppers, and late hours, are peculiarly unsuitable.

SUPPOSITORIES, are medicinal substances, introduced in a solid form into the rectum. Some are given to produce a discharge from the bowels, and may be applied even to very young infants. A little bit of soap may be used

for them. Suppositories are also employed to destroy the worms called ascarides; aloes and soap are good in this case. Opium may be introduced as a suppository, to relieve pain and irritation arising from diseases of the bladder, the womb, and parts in the neighbourhood.

SUPPURATION. The formation of *pus*, or matter. *See* INFLAMMATION, *page* 328.

SURFEIT. An overloading of the stomach, with too great a quantity or mixture of food. The effect of this, if it be not got rid of by the vomiting which it sometimes excites, is, acid or putrid eructations, continuing for some days; a disinclination to food, sickness, and flatulence. Sometimes a looseness comes on; this is the way nature takes to relieve herself of the superfluous load; and if such looseness does not occur, some smart purgative should be administered. Till the unpleasant symptoms are gone, the diet should be very spare and simple.

SUSPENDED ANIMATION. *See* DROWNING.

SUTURES. In anatomy, sutures signify the corresponding indentations and projections which unite the bones of the skull to each other; and in surgery, they mean the various kinds of stitches used to bring wounded parts into contact or apposition.

SWALLOWING, how performed. *See* GULLET.

SWEAT. When the insensible perspiration is increased by exercise, or by any substance taken into the stomach, or by any internal action in the body itself, and gathers into drops so as to become visible, it is called *Sweat*. "This evacuation is sometimes wanting, and persons enjoy good health, who hardly perspire at all; in many, no art can excite it; in others, it is free, particularly when the heat is most slightly increased, or after very inconsiderable exercise." Sweating is sometimes a salutary effort of the constitution to throw off noxious matter; sometimes by the evaporation, it relieves the burning heat of a paroxysm of fever, while in other diseases it marks a relaxation and sinking of the powers of the system, and is a symptom of bad omen. In consumption, it is called colliquative, as if melting down the bulk and strength. A copious and general sweat is one of the best means employed for the cure of rheumatism; and this is effected by giving certain medicines which have the power of increasing the perspiration. *See* RHEUMATISM.

SWELLED LEG *of Women in Childbed*. *See* PHLEGMATIA DOLENS.

SWELLINGS are of various kinds, either of the whole body, or of particular members, or local and circumscribed. Watery swellings of the whole body are seen in general dropsy; and the same disease in its commencement occasions partial swellings, as of the lower extremities, or of the arms or face, according to the position of the body. Circumscribed swellings occur in various glands, as those of the neck, arm-pit, or groins, chiefly in scrofulous constitutions; or they may arise from inflammation, the consequence of cold. The tonsils swell in sore throat, and occasion a fulness of the external parts of the throat; gumboils form during toothach, and swell the cheeks; and the bronchocele, or goitre, is an instance of a still more permanent swelling. The face, head, and limbs often swell exceedingly from rose. The treatment of those different swellings must vary according to their symptoms and causes, and has been fully detailed under different articles in this work.—*See* SCROFULA, BRONCHOCELE, GUM-BOIL, ROSE, &c.

SWEET SPIRIT OF NITRE is an excellent diuretic medicine, obtained by distilling alcohol and nitrous acid. It is useful in childbed cases, when the water is passed scantily and with difficulty; and is used in doses of two drachms in a small cupful of tepid water every two hours, till the effect is produced. Sweet spirits of nitre are useful also as a gentle stimulant, which moderately strengthens the stomach, and at the same time quenches

thirst. It may be given in a mixture, consisting of one ounce of spirits of nitre, three of cinnamon water, three of spring water; a dessert-spoonful to be taken every three hours; and if a further diuretic and sedative action be wanted, two drachms of the tincture of fox-glove may be added to the above mixture.

SWINE-POX, *or* HIVES. A popular name for one of the varieties of Chicken-Pox. In the swine-pox, the vesicles are large and globated, but their base is not exactly circular. There is an inflammation round them, and they contain a transparent lymph, which, on the second day of the eruption, resembles milk-whey. On the third day, the vesicles subside, and become puckered and shrivelled; they likewise appear yellowish, a small quantity of pus being mixed with the lymph. Some of them remain in the same state till the following morning; but before the conclusion of the fourth day, the cuticle separates, and thin blackish scabs cover the bases of the vesicles. The scabs dry and fall off in four or five days. Some degree of fever generally precedes the eruption of swine-pox, and the other varieties of chicken-pox, for a couple of days; and occasionally continues to the third day of the eruption. This fever sometimes is very slight, so that it is only recollected after the eruption appeared, as having been previously indicated by fretfulness. When the globated vesicles of the swine-pox appear, they afford a ready distinction from the small-pox, to the pustules of which they bear little resemblance. In the treatment of this disease, nothing in general is requisite beyond an attention to the state of the bowels, and abstinence from animal diet for two or three days. (DR. BATEMAN *on Cutaneous Diseases.*) *See* CHICKEN-POX, *page* 117.

SYMPATHY, in medical language, means, the consent of two or more parts of the body in one common action or suffering. The various parts of the body in some degree all sympathize with each other, but there are some whose actions are more particularly connected together. The stomach has a very general sympathy with the whole system, so that scarcely any organ can be affected with disease, without the stomach suffering with it. Thus, calculous disorders in the kidneys or bladder occasion vomiting; the condition of pregnancy, and various states of the womb, also occasion sickness and vomiting. The brain, the liver, the intestines, the joints, and the surface of the body, sympathize with the stomach. A disgusting smell excites vomiting, and any thing irritating the fauces or the upper part of the wind-pipe, brings a great many sympathetic organs into action, to produce the cough or the sneezing necessary for its expulsion. The womb sympathizes particularly with the breasts, and with other parts peculiar to the female system. When a person has cold feet, and is standing in a damp place, he feels a pain at the pit of the stomach; and so complete is the sympathy established here, that by changing the shoes or drying the feet, the pain is almost instantaneously removed. A bright light thrown on the eye occasions sneezing; and a pungent odour in the nostrils produces a flow of tears. The uniform and parallel motion of the two eyes is to be ascribed to sympathy. The relief obtained in diseases of the internal parts from a blister applied to the skin, is by some explained on the principle of sympathy.

SYNCOPE. *See* FAINTING.

SYNOVIA. "The liquor which principally serves to moisten the ligaments and cartilages of the articulations. It is supplied by glands which are commonly situated in the joint, after such a manner as to be gently pressed, but not destroyed by its motion. By this means, when there is the greatest necessity for this liquor, that is, when the most frequent motions are performed, the greatest quantity must be separated. If the synovia is separated in too small a quantity, the joint becomes stiff; and when with difficulty it is moved, a crackling noise is heard, as people advanced in years frequently experience." (Dr. MONRO, *Primus.*)

SYPHILIS, *Lues Venerea, the Venereal Disease.* This formidable and loathsome disease is generally the consequence of impure sexual intercourse; but in the various and complicated relations of society, it may be in many cases received very innocently. This disease is owing to a poisonous matter introduced into the system by absorption, and thus producing more poisonous matter, which in time corrupts the fluids, and occasions many disorders in the various parts of the body. The symptoms of syphilis are either primary or secondary.

I. *Primary Symptoms.* The primary are those which appear in the near vicinity of the place to which the matter has been applied, and which appear not long after its application: the secondary are those which occur in distant parts, and which in some instances do not show themselves for a very long period. As the infectious matter is commonly received by impure connexion, the first symptoms generally show themselves on the genital organs, in the form of chancre; by which is meant, an ulcer considerably inflamed and painful, unequal at the bottom, with prominent edges of an ash colour, having little tendency to heal, but rather continuing to spread, if left to itself. The matter being taken up by the absorbents, is carried by them to the nearest glands; these glands are irritated, become inflamed, swelled and painful; and go on to suppuration: when in the groin, these swellings are termed buboes. If the syphilitic matter be applied to the hand, as may happen when a surgeon having a slight cut or scratch, gets some of it from dressing a venereal sore; or to a patient, from being bled with a lancet which has opened a bubo, or to those who wash the clothes of infected patients; in all those cases, the same symptoms ensue, and the glands in the arm-pit are the seat of swelling and suppuration. Sometimes, nurses get the syphilitic infection from suckling children who have been born with the disease, and in them it appears on the nipples; and the glands of the arm-pits swell. If the matter be applied to the lips, the glands of the neck swell. The symptoms above mentioned, viz. chancre and bubo, are to be regarded as the primary and local symptoms of the venereal disease, and the constitution may be still uninfected; but unless these are checked by the proper remedies, the poison may pervade the system, and produce other bad effects.

II. *Secondary Symptoms.* In whatever way the matter has entered, it is particularly ready to attack the throat. In this kind of sore throat, some uneasiness is felt in swallowing; and there is a sensation of fulness and tenderness, without much pain. When the throat is examined, an ulcer is in most cases observed, generally on one of the tonsils or almonds of the ear, but sometimes on the uvula. These ulcers are small at first, but sometimes quickly spread, and destroy a portion of the contiguous parts; from the first, they are foul, and have a degree of fulness and swelling, with an erysipelatous redness of the neighbouring parts. Sometimes there are dark copper-coloured spots on the throat, continuing for weeks. A troublesome attendant of the sore throat is the constant heat and irritation of the parts, with the formation of acrid tough mucous, which gives the patient much trouble to get it thrown off. Deafness is not an unfrequent accompaniment of the sore throat. Sometimes, when the disease has been neglected, or when the remedies do not succeed, the ulceration spreads beyond the soft parts, and destroys the bones of the palate, and back parts of the nose.

Next to the throat, the nose is most liable to be attacked by the venereal disease. The patient complains of a stoppage in one of the nostrils, with tenderness and pain at a particular point. When this point can be seen, it is found to be covered with a slough or crust, with a foul sore beneath. There is a discharge, which increases, as it continues, and is thin and ill smelled. If the thin spongy bones of the nose become affected, the

matter becomes blackish, and the smell is very offensive. Portions of the bones come away, and, in time, the figure of the nose is changed; at first by the external parts becoming red and swelled, over the ulcerations; and then by the bones coming away, it loses its prominency, to the great disfiguring of the patient. Ulcers also take place on the palate and other parts of the mouth; and the destruction occasioned by their progress in the parts necessary for the formation of the voice, occasions a total loss of the power of modulating it.

The skin is the part next most liable to be affected by syphilis. On the skin, there appear eruptions or blotches, chiefly on those parts which are generally kept covered, as the breast and arms; and successively, on the shoulders, thighs, legs, feet, and hands. These blotches are not painful at first, but have a slight degree of itchiness. They are of a pale red colour; and sometimes disappear for a time, and again either attack the same parts, or go to others. The skin is now inflamed and tender, and a scab or crust forms on the parts. When ulcers attack a person who is tainted with the syphilitic poison, they are generally of a bad and eating nature, destroying a great deal of the surrounding parts. In advanced stages of syphilis, the bones of the extremities and of the forehead are liable to be affected with swelling, and hard unequal knotted appearances. The hair falls off, blindness attacks the patient, and a variety of maladies assail him, which destroy life in misery and putrefaction.

Of the Cure of Syphilis. Nothing could exceed the alarm and dismay occasioned in Europe, by the wide-spreading ravages occasioned by this disease, shortly after its appearance in 1493; and it was not till a considerable number of years afterwards, that the casual coincidence of its occurring in certain persons, who were treated by mercury for diseases of the skin, and who were cured of both complaints by that mineral, led to the discovery that it was capable of safely and completely curing lues venerea. From that time, this dreadful scourge was divested of the terrors excited on its first appearance; and physicians, till within these few years, have been quite confident of safely curing the vast majority of syphilitic cases by the prudent use of mercury; but of late, it has been suggested, that the dreadful havoc made on the constitution is not the effect of the venereal poison, but of the combination of it with mercury. It has been proposed in consequence, and it is said that many cases have done well, to cure syphilis without mercury at all. It is not easy to get rid of the conviction impressed on the mind, by the recorded experience of able and upright physicians during three hundred years; nor to forget what we have observed in our own practice; we cannot, therefore, as yet, discard mercury as unnecessary, or condemn it as pernicious.

We must here premise, that there are some constitutions to which mercury is peculiarly adverse, and in which syphilis appears to gain ground under almost every manner of administering it; and also, that the rapid, violent, and long-continued salivations, at one time too common, were exceedingly likely to inflict irreparable injury on the constitution. But the skilful and prudent exhibition of that active and important mineral is calculated with ease and safety to cure syphilis in every stage, both primary and secondary; and to guard the constitution from all those hateful effects, of which the early writers give such just and affecting details, in works which were written before mercury was employed in its cure.

1. *Chancre.* If a chancre has been seen by the surgeon when recent, it is to be treated by local applications; it is to be dressed with mercurial ointment, and if it be touched with lunar caustic, it will the sooner put on a healthy action. It may happen, that the application of the caustic will cause a swelling in the groin, which may be mistaken for true bubo; but this will go off when the irritation

from the caustic subsides, or it may be kept back by cooling lotions. Nearly the same treatment will answer even somewhat later; but it will be a matter of precaution to bring the system in a slight degree under the influence of mercury, and to keep the mouth sore for a week after the chancres have healed.

2. *Bubo.* When we find that we cannot prevent the formation of a bubo, our best plan is to bring it forward to a kindly suppuration by emollient poultices; and when it is ripe, to open it with a lancet, like a common abscess. It will be still more necessary now, to put the system under the influence of mercury, and to keep it so for a longer time; though there is no occasion to use it with the rapidity and violence formerly too common. In scrofulous constitutions, buboes are sometimes the commencement of extensive ulcerations, which are very painful, and discharge a very acrid matter. The pain is to be alleviated by washing the parts with a decoction of poppy heads, and afterwards applying some emollient plaster. If there be a tendency to fungous growth, it may be proper to sprinkle a little red precipitate of mercury, and to dress with basilicon or other stimulating ointment, till a better action is put on by the parts. Internal medicines are necessary, as sarsaparilla, or the nitric acid; and unless there are urgent symptoms of the original disease threatening the destruction of important parts, it will be prudent to suspend the use of mercury by the mouth, or rubbing in. If the constitution be feeble, bark and wine, and other tonics are to be given; and irritation is to be allayed by the use of opium or hemlock.

3. *Constitutional Symptoms.* These are so many and so various, that it is needless to enumerate them again, since for each of them, mercury is the principal remedy; and the skilful exhibition of it, and the application of appropriate remedies to local symptoms, are the great instruments we employ. Gargles and washes are to be used for the throat, dressings for ulcerations, and sudorifics for the skin; all in addition to the mercurial course, which, in different cases, will require to be continued for various lengths of time.

Under the article MERCURY, we have mentioned the symptoms occasioned by its use, and the proper method of conducting a mercurial course; and it is one mark and evidence of the improved condition of medical science and practice, that the tedious, debilitating, and dangerous courses of mercury formerly in use, are now altogether laid aside. The unpleasant consequences arising from mercury improperly administered, naturally excited many a wish that some other medicine might be discovered, free from the inconveniences of mercury; and accordingly many articles of the Materia Medica have been successively brought forward, and many virtues ascribed to them in the cure of syphilis. Some of them may no doubt be useful auxiliaries, and some of them may give relief in certain symptoms, as opium, sarsaparilla, the nitric acid, and some others; but for real curative powers, nothing can be compared with mercury. Whether the modern method of curing syphilis without mercury at all, will be found to answer, must be left to time.

SYRUP. A saturated solution of sugar in water. Sometimes other substances are added; and from these, the whole derives its name, as the syrup of squill, from the addition of the vinegar of squill; or the syrup of Tolu, from the tincture of the Balsam of Tolu. Syrups are useful for disguising the bad taste of nauseous medicines.

SYSTOLE. The contraction of the ventricles of the heart, by which the blood is propelled out of them into the great arteries of the lungs and of the body.

T

TAR

TÆNIA, a name for the tape-worm. *See* WORMS.

TAMARINDS, *Tamarindus Indica.* The tamarind-tree grows both in the East and West Indies. The fruit is a broad pod; and the pulp of this, which contains the agreeable acid of the tamarind, is preserved by putting alternate layers of tamarinds and powdered sugar in a stone jar. Copper vessels should not be employed in any stage of the preservation or use of tamarinds, as the acid is apt to occasion their being contaminated by that poisonous metal. Preserved tamarinds should be fresh and juicy, and should have an agreeable acid taste, without any musty smell. The pulp, taken in the dose of two or three drachms to an ounce, acts as a laxative; and when infused with senna leaves it is one of the best and mildest that can be given. A dessert or tablespoonful of tamarinds, with four drachms of senna leaves infused in a pint of water for fifteen minutes, and strained, may be given in doses of a tea-cupful every four hours, till the bowels are moved, and is a very safe domestic remedy. In febrile diseases, tamarinds by their acidity are very agreeable; and a pleasant cooling drink is made by simply pouring water over them.

TANSY, *Tanacetum vulgare.* A strong-smelling plant, thought in some cases to be good for the gout, and hysteria proceeding from obstructed menstruation; but now hardly ever used in medicine.

TAPE-WORM. *See* WORMS.

TAPIOCA. A kind of starch made into grains, strained from the roots of the cassada, and much used as a diet for sick and weak persons.

TAR is obtained by condensing the smoke and vapours which issue from firwood when it is burned. The vapour of

TAR

tar is recommended to be diffused through the apartments of those afflicted with consumption and other disorders of the lungs; and in some cases this inhalation has appeared to do good. We may mention here, what we should have stated under PITCH, that that substance, according to Dr. Bateman, has in some instances been beneficial in *ichthyosis,* or fish-skin disease, having occasioned the rough cuticle to crack and fall off, leaving a sound soft skin underneath. This medicine made into pills with flour, or any farinaceous powder, may be taken to a great extent, not only without injury, but with advantage to the general health; and affords one of the most effectual means of improving the languid circulation, and the inert and arid condition of the skin. The quantity to begin with may be ten grains three times a-day. The unpleasant pitchy flavour of the pills is materially diminished, if they are kept for some time after being made up.

TAR-WATER. Water impregnated with the smell and taste of tar, by infusing tar in water, stirring it from time to time, and pouring off the clear liquor. It was once a remedy in great vogue, and the learning and genius of Bishop Berkeley were employed to recommend it as an almost universal medicine. It is now used occasionally as a drink, in chronic affections of the lungs.

TARANTULA. A venomous spider found near Naples, whose bite is said to excite a kind of madness, accompanied with an irresistible propensity to dancing, and to be cured only by music; but Dr. Cerillo declares, " that he never could make the tarantula bite him, nor any other person, though provoked." (PARR).

TARTAR. The substance deposited in the inside of wine casks, consisting of

a particular salt much mixed with colouring and extractive matter. When these are removed, the purified substance is called *cream of tartar*, the properties of which are detailed under that article.

TARTAR EMETIC. *See* ANTIMONY.

TARTAR OF THE TEETH. The saliva contains, among other matters, a mucus which is deposited on the teeth, principally during sleep. It is there decomposed, and its colour changes from white to yellow, and often to a darker shade. It attaches itself very much to the teeth of people who have delicate stomachs, and of those who have the saliva tough and viscid, and who have their gums pale, soft, and bleeding. Tartar accumulates in the intervals of the teeth, especially of the lower front teeth; and when long neglected, it separates the gums from the teeth, and renders them loose and tender. It is to be prevented from accumulating, by constant attention to washing the mouth, and using proper dentrifices. When very thick and inconvenient, it will require to be removed by the instruments of the dentist. *See* TEETH.

TARTARIC ACID is obtained from cream of tartar by a chemical process described in the Pharmacopœias. Its taste is acid, and very agreeable. It is used as a cheap substitute for the concrete salt of lemons in the formation of soda-powders and Seidlitz powders. The white papers of the soda-powders in the shops contain tartaric acid, and the blue contain bi-carbonate of potass.

TASTE. That sense residing chiefly in the tongue, by which we acquire the knowledge of the sapid properties of bodies, and by which we are in general taught, with great certainty, whether substances are proper to be taken into the stomach or not. In general, noxious bodies have a disagreeable taste, and are immediately rejected; at least in animals, and in the unsophisticated human subject, this is commonly the case. Vicious indulgence and excess may produce very pleasant sensations on the palate, though the good food swallowed is soon to be hurtful; and many drugs which are to have the most beneficial effects, are by no means grateful to the taste. In fevers and various other disorders, the taste is depraved or lost.

TEA, *Thea*. A plant of various species, which grows in China and Japan, of which great quantities are imported in the state of the dry leaves from China. In Europe, and especially in Britain, the infusion of these leaves has become one of the necessaries of life; and from its fragrant and agreeable properties it is likely for ever to maintain its universal estimation. The principal kinds of tea used in this country, are the green and bohea; of which there are three kinds of the first, and five of the second. The green tea is the most remarkable for its sleep-repelling properties. The bohea is that in the most general use.

The properties of tea seem to be those of an astringent and narcotic; but like some other narcotics, in small quantity, its first effect is that of a very gentle stimulant and certain kinds of it, when taken pretty strong and near the usual time of going to rest, have the effect of keeping off sleep; but when taken moderately, and tempered with cream and sugar, it acts merely as a grateful diluent, and conveys a slight exhilaration.

At its first introduction, and for more than fifty years afterwards, tea was violently assailed, and many frightful disorders were attributed to its use; it was said to produce indigestion, lassitude, melancholy, and a long train of nervous complaints. Such apprehensions, or at least inquiries indicating such, are sometimes to be met with still; but the long and universal experience of this country has decided, that from the use of tea, as generally practised, there result no bad consequences whatever. It should not be taken too soon after dinner, as it may interfere with digestion from its distending the stomach, and from its astringent and narcotic properties; but when taken three or four hours after the principal meal, it assists the latter stages of diges-

tion, and promotes the insensible perspiration. There are peculiarities of constitution in some which render tea very hurtful to them; but the same is true of many substances used both in diet and medicine.

Those who are fixed down to a sedentary employment, who must work at night, and who take tea to keep themselves awake; who, from the want of exercise are unable properly to digest animal food, will no doubt exhibit many symptoms of indigestion, and that feeble tremulousness, known by the epithet *nervous;* but the tea ought not to bear the blame of all those disorders, which are more justly to be ascribed to the confinement and inactivity of the patient. In enumerating the advantages of tea, says Dr. Paris, it must not be forgotten that it has introduced and cherished a spirit of sobriety; and it must have been remarked by every physician of general practice, that those persons who dislike tea, frequently supply its place by spirits and water. We may add, that for one patient whose general frame, or whose digestion is weakened by the use of tea, ten thousand are irretrievably injured by the use of alcohol, however diluted and disguised.

Amidst the variety of topics discussed in this work, we have been rarely tempted to indulge in any quotation, not strictly scientific; but on the subject of tea, we recollect with pleasure the hearty defence of that much opposed beverage, by Dr. Samuel Johnson, in the year 1756. He warns Mr. Hanway, the writer of an Essay on Tea, who considered it "as pernicious to health, obstructing industry, and impoverishing the nation;" that he is to expect little justice from a hardened and shameless tea-drinker, who has for twenty years diluted his meals with only the infusion of this fascinating plant; whose kettle has scarcely time to cool; who, with tea, amuses the evening, with tea solaces the midnight, and with tea welcomes the morning.

"That the diseases commonly called nervous, tremors, fits, habitual depression, and all the maladies which proceed from laxity and debility, are more frequent than in any former time, is, I believe, true, however deplorable. But this new race of evils will not be expelled by the prohibition of tea. This general languor is the effect of general luxury, of general idleness. If it be most to be found among tea-drinkers, the reason is, that tea is one of the stated amusements of the idle and luxurious. The whole mode of life is changed; every kind of voluntary labour, every exercise that strengthened the nerves, and hardened the muscles, is fallen into disuse. The inhabitants are crowded together in populous cities, so that no occasion of life requires much motion; every one is near to all that he wants; and the rich and delicate seldom pass from one street to another, but in carriages of pleasure. Yet we eat and drink, or strive to eat and drink, like the hunters and huntresses, the farmers and the housewives of the former generation; and they that pass ten hours in bed, and eight at cards, and the greater part of the other six at the table, are taught to impute to tea all diseases, which a life unnatural in all its parts, may chance to bring upon them."

In the seventy years which have elapsed since those remarks were written, the use of tea has extended far beyond the idle and luxurious; but it has neither unfitted the husbandman for labour, nor the hero for war. It has been the beverage of the soldier in his camp, of the seaman on his voyage; yet neither Grecian activity nor Roman steadiness surpassed the warlike virtues recently exhibited by British valour, in every climate of the globe.

TEAR. A saltish fluid secreted by the lachrymal gland in the upper eyelid, destined to flow over the eye, for the purpose of keeping it moist. Certain passions of the mind cause an increased flow of tears, as joy and grief. Violent laughter has the same effect.

TEETH. The teeth of a person at maturity are in general thirty-two in

number, sixteen in each jaw. They are of different forms, according to their uses: thus, in the front of each jaw, there are four teeth for cutting or dividing our food, called incisors; two in each jaw at the sides of the former, for tearing or laying hold of the food; and the rest on each side of these are grinders, for bruising and comminuting it. The teeth which first appear in children are twenty in number; but as their small size would not suffice to fill up the jaw, as it increases to its proper bulk in the adult, the first set of teeth, by an admirable provision of nature, fall out, and are succeeded by teeth of a larger size, which are permanent till the period of old age. Each tooth has a crown or body; this is the part which projects from the gums; also roots, or fangs, the number and direction of which vary in the different kinds of teeth; and a neck between the other two portions. The whole of the part which is out of the socket is covered by a thin, but exceedingly compact and firm crust, called the *enamel;* so hard and solid, says the first Monro, that saws or files can with difficulty make impression on it. Notwithstanding its great hardness, it is in time wasted by chewing; hence, the rough surfaces of some teeth are made smooth and flat, as people advance in life. A little to the side of the extremity of each root of a tooth is a small canal, by which blood-vessels and nerves enter to convey life and nourishment. When in old people this hole is obliterated, the nerves and vessels cannot enter, and the teeth loosen, and drop out. The teeth are very sensible to impressions from cold and acid fluids. Besides being necessary for mastication, the teeth assist in the pronunciation of several letters.

Diseases of the TEETH. The teeth are liable to caries or wasting, and when a tooth is so much decayed that the cold air, and cold or acrid fluids reach the nerves within, the painful disease called toothach is the consequence. Carious teeth render the breath fetid, and may injure digestion by vitiating the saliva. *See* TOOTHACH.

Care of the TEETH. Much may be done to promote the health and beauty of the teeth. At the time of the growth of the second set, great attention should be paid to them; and as children are thoughtless of futurity, those who are their protectors and guardians should think for them; and take care both of their general health, and of the proper advancement of the teeth. Under DENTIST, we have mentioned a variety of particulars, which come under the cognizance of his branch of surgery.

By attention to cleanliness, the prudent use of proper dentifrices, and being careful not to allow particles of food to lodge about the teeth, much may be done to further a person's own health and comfort, to prevent the encrusting of the teeth with tartar, and to counteract the tendency to rottenness.

TEETHING, *or* DENTITION. As infants are destined for some time to live on milk, or food that requires little or no mastication, the teeth in the first months of life are covered by the gums; and as they advance, they push the gum before them, till, by the process of inflammation and ulceration, the gum is eroded, and the tooth projects from the socket. This process does not begin in every child at the same age. In general, the first pair of teeth appear before the seventh month, and the last before the end of the second year. Those teeth which are to drop out are called the milk-teeth or shedding teeth; they are twenty in number, ten in each jaw. They generally appear in pairs, and those in the lower jaw are cut before the corresponding ones in the upper. The order of succession is most usually this: the two middle front teeth or incisors, then the two next to them, the anterior grinders, the eye-teeth, or canine, and lastly, the posterior grinders. There is an interval of one, two, or more weeks between each successive pair. The variety is great in different individuals, with respect to the commencement and pro-

gress of teething. In some, not a tooth appears before the fifteenth or eighteenth month; in others, the first pair are through by the end of the third month. Sometimes those of the upper jaw come first; sometimes, several pairs come very rapidly, and then there is a considerable interval before the rest advance. From the great irritability and tenderness of constitution of infants, they are liable to many disorders in the course of teething; from a simple and salutary looseness to severe and fatal convulsions. Few children get their teeth without suffering more or less; and during the whole process, their health must be particularly attended to. "An estimate of the danger attending dentition is to be formed, chiefly from the nature of the symptoms. Experience proves, that puny, delicate infants often suffer less than the most healthy and robust. In this climate, it has been found that summer is a more favourable season for teething than winter. Some infants cut their fore-teeth without any pain or difficulty, but are much distressed while cutting the grinders or eye-teeth. It is well known, that during teething, every acute disease is more than usually dangerous; and it is also a well established fact, that infants in a crowded city are more liable to pain and alarming symptoms at that time of life, than those reared in the country."

We shall here give a short account of the most frequent diseases to which children are liable during the time of teething.

Uneasiness about the Mouth. The pressure of the teeth on the gums occasions pain, and an increased flow of saliva; the infant is fretful, is restless during the night, has great desire to rub his gums, and frequently thrusts his hands into his mouth for that purpose, slavers continually; and has occasionally sickness, griping and looseness.

Looseness. This last is a very frequent symptom; and it is in many cases to be considered as rather salutary, by diminishing the feverish irritation; and it should not be hastily interfered with. But, on the other hand, most particular care must be taken, that the looseness do not go too far, as a dangerous and even fatal disorder of the bowels may be induced. To prevent this, we are to attend to the gums; and even though the teeth should not be very near, we may scarify them, by which the tension will be taken off for the time; and this may be repeated when the teeth are nearer. The bowels are to be regulated by proper purgatives at first, to remove any irritating matter, and to correct the acrimony of the discharges; and then the looseness is to be checked by opiate clysters, or by the tincture of opium, or astringents prudently given by the mouth. Magnesia may be given to correct acidity.

Fever. In many strong healthy children, the appearance of every tooth is preceded by violent fever. The gums are inflamed and swelled; the eyes are affected, the skin is hot and dry, and the belly bound; the child screams much, and is unable to suck, and the sleep is disturbed. This feverish state is to be alleviated by tepid bathing, by giving a little cream of tartar, or other purgative medicine; and by scarifying the gums when this is necessary.

4. *Spasmodic Affection of the Wind-Pipe.* "The most formidable symptom, except convulsions, which occurs during dentition, remains to be noticed: it is a kind of convulsive stricture of the upper part of the wind-pipe, producing a peculiar crowing sound as if from threatening suffocation. This affection is quite momentary, and generally happens on awakening from sleep, on taking food or drink, or on the infant being teazed or irritated. Sometimes the fits are redoubled, but more often they are single. The disease is unaccompanied by fever, or any material derangement of the general health. When cough attends, which is not always the case, it is not hoarse, and the breathing during the intervals is perfectly free. Those circumstances distinguish it from the croup, which it resembles in the crowing sound.

"It has appeared in the robust, as well as the most delicate infants, and it sometimes continues for months, occasionally decreasing in violence, and suddenly becoming again aggravated; so that for a week or two, the infant shall have forty or fifty attacks within the twenty-four hours, and then the number shall be diminished to eight or ten. The event to be dreaded is sudden suffocation, or a severe convulsion from which the infant cannot be recovered. In several cases this has happened at the distance of many months from the first attack, and after the infant had seemed almost perfectly relieved from the disease.

"For the successful treatment of this complaint, the utmost attention on the part of the practitioner is required, as no reliance is to be placed on any apparent remission or mitigation of the characteristic symptoms; for so long as these continue to recur in any degree whatever, till all the milk-teeth be protruded, danger is to be apprehended. The plan of cure which has hitherto seemed successful, has been, to watch the state of the gums, so as never to allow much local irritation from the pressure of the tooth; to open the bowels very freely by means of varied purgatives, with which absorbents or antacid medicines are combined; to regulate the diet; to direct some stimulant substance to be rubbed every six hours on the outside of the throat, and to give frequently some antispasmodic. After having tried the effects of preparations of opium, of hyoscyamus, of valerian, and of assafetida, without any apparent benefit, Dalby's carminative, in doses, repeated every four or five hours, or oftener, according to the urgency of the case, has appeared preferable to every other medicine. Blisters on the throat or breast are to be used as auxiliaries; and the warm bath, and preparations of antimony, and even of foxglove are to be occasionally advised, for the purpose of palliating symptoms. Change of air has in several cases appeared to have an almost immediate effect in arresting the progress of the disease, but in all such cases, the healthy action of the bowels had been previously restored." (Professor Hamilton *on the Management of Children.*)

Convulsions. These are very alarming, and require prompt assistance. The gums are to be scarified, and the teeth liberated. The warm bath is to be applied to the lower part of the body, and a little valerian or antispasmodic tincture to be given. It may be prudent also to take away a little blood by leeches, in order to prevent too great a flow of blood to the head, which frequently occurs, and induces inflammation and consequent effusion.

Water in the Head. *See* Head, *Water in.*

Sickness. In weakly infants, when the teething is difficult, there is much sickness, loathing of the food, and continual fretfulness; also looseness and great emaciation. Opiates combined with calome should be given; and the diet must be light and nourishing, as ass's milk, weak beef-tea, with rice and arrow root, prepared with a considerable proportion of boiled milk.

A variety of other complaints are occasionally the effects of teething, as cough, eruptions on the skin, inflammation of the eyes, affections of the urinary organs. In such cases, it is good to attend to a general rule, laid down by Mr. Burns; which is, to treat the diseases of children, when teething, as we would do in any other case, with the additional practice of scarifying the gum.

This operation of scarifying the gum, which we have recommended in the various morbid affections occurring in the course of teething, is one of great safety and utility. The pain it inflicts is but small and momentary, and in many cases the child hardly even cries for it; and the relief which is speedily afforded, is frequently very striking. A train of painful and alarming symptoms, and even convulsions, subside almost immediately on the teeth being liberated. It

is necessary that the operation be completely done, by incisions crossing each other. There is no scar or hardness left, so that the same gum may be scarified three or four times if necessary. During teething, the infant should have something put into his hands, to rub his gums with, which will both please him, and tend to promote the absorption of the parts which cover the teeth.

TEMPERAMENTS. A word used to signify the varieties of constitution in different individuals. These were noticed and described by the ancient physicians; and though their names were founded on a false theory, and were derived from different fluids or humours, which they supposed to predominate in the body, these names are still retained, though we reject their explanation. The great variety of constitutions observable among mankind may be reduced to two, the sanguineous and the melancholic; and these blended in various proportions, constitute other varieties, which may be termed the choleric or the phlegmatic.

1. Persons of the *sanguine* temperament have considerable laxity of the solids, their hair is soft and light coloured, their skin is delicate, their eyes blue or grey, their arteries are large, their complexion florid. The mobility and sensibility of their nervous system is great, and their moral character partakes of this mobility. Persons of sanguine temperament are easily elated and quickly depressed; unsteady in their pursuits; ardent and full of hope; pursuing their objects keenly for a time, but soon changing them for others. The sanguine temperament is more peculiarly liable to diseases of excitement, fevers, inflammation, hæmorrhagies, consumption. 2. The *melancholic* temperament has greater rigidity of the solids; the hair is coarse and black, the arteries are small, and the persons are dry and lean. They are not easily roused; but when they are so, they keep to their purpose with great steadiness. Their strength is commonly great. The bowels of such persons are slow. They are subject to hypochondriasis, to apoplexy, and diseases of the liver. 3. The *choleric* temperament is distinguished by a profusion of black curly hair, a hard, lean, slender body; a brown complexion, large veins, a full quick strong pulse; obstinacy and violence. 4. The *phlegmatic* temperament is distinguished by great smoothness of the skin, white thin hair, growing sparingly; a white, soft, full, plump body, small and almost imperceptible veins.

Some have written with great minuteness on the different temperaments, and have talked of hot and cold, moist and dry, serous, temperate, cacochymic, and other useless distinctions. The four which we have mentioned are tolerably well marked, and sufficient for every practical purpose.

TEMPORAL ARTERY. The artery which runs across the temple, and which is frequently opened in cases of apoplexy and other diseases, where it is reckoned of importance to get blood from vessels about the head. The bleeding generally stops easily enough; but if it should not, we may employ compression, or cut the vessel across.

TENESMUS. A frequent ineffectual straining at stool; a painful symptom of dysentery and other diseases of the the bowels. When it is judged prudent to relieve this symptom particularly, it is chiefly by opiate clysters that we expect to accomplish it; but opium is also given by the mouth.

TENT. A small piece of lint, or linen put into a wound to prevent its healing too suddenly, or to hinder its closing at the top while the bottom is unsound. In very large abscesses, there should always be a tent put in when they are opened, and kept in for a few days, that they may fill up from the bottom, and that no sinuses or lodgement of matter may be formed. In the old surgery, tents were frequently besmeared with irritating ointments, and absurdly crammed into recent gun-shot wounds, and even into simple incised wounds, or clean cuts.

TERTIAN AGUE. An intermittent fever, the paroxysms of which recur every other day; or the time from the beginning of one cold stage to the beginning of the next is forty-eight hours; two days being occupied with the various parts of the attack and intermission, and the third day being that on which the same series recurs. *See* AGUE.

TESTICLES. The two organs for secreting the seminal fluid, situated in the scrotum or bag at the lower part of the belly. They are subject to a considerable variety of diseases.

1. *Inflammation of the* TESTICLE is a very common symptom of clap, especially when the running is attempted to be checked by too astringent injections, or when the urethra is irritated by strictures or by bougies. The first appearance of swelling is generally a fulness and tenderness of the body of the testicle, which increases to a hard tumour, accompanied with considerable pain. There is a pain in the loins, and a sense of weakness there, and in the neighbouring parts. There is also occasionally uneasiness or pain in the stomach and bowels, with sickness and vomiting. The swelling and inflammation sometimes appear suddenly, and disappear in the same manner, or go from one testicle to the other. Sometimes, on the coming on of the swelling, the pain and heat in making water are removed, and the discharge of matter is suspended; sometimes, however, the discharge becomes greater, though the testicle has swelled.

Treatment. Inflammation of the testicle is to be treated as inflammation in general, by rest, by bleeding and purging, and by fomentations and poultices. Leeches in considerable numbers are to be applied to the parts. Emetics sometimes produce a cure in a very speedy manner; opiates are also useful to allay irritation. The swelling subsides quickly at first, but some degree of it remains for a long time, and may do so for life; but the mere hardness is not a very great inconvenience.

2. *Sarcocele or Fleshy Enlargement of the* TESTICLE, is a disease in which the structure is changed from the delicate vascular texture peculiar to it in the healthy state, to a substance resembling hard flesh. Sometimes the first appearance is a mere enlargement and hardness, without any inequality of surface, and producing no pain or uneasiness except what proceeds from its weight; and in this harmless state, it sometimes continues for a good while. But, on the contrary, it sometimes happens that it suddenly becomes unequal and knotty, attended with acute pains, darting up to the loins and back. At other times, the membrane enveloping the testicle becomes diseased and ulcerated, and either a large foul offensive sore ensues, or a fungous growth shoots out, very painful, with a thin acrid discharge, and subject to frequent bleeding. Sometimes it is entirely a local complaint; at other times it is shown that the constitution is unhealthy, by a pallid, leaden countenance, sickness, and indigestion. The probability of the painful and fatal termination of such an affection of the testicle, renders it always a great object, if possible, to arrest this hardened state in its early progress. A very little time may be employed in attempts to remove hardness by such methods as are sometimes found to remove the hardness in other glands, by leeches and by friction, by mercury with a view to its deobstruent powers, and by attention to the general health; but in the confirmed hardness nothing can secure the patient from the worst cancerous termination of the disease, except the removal of the diseased testicle.

3. Another affection of these parts is *Hydrocele*, which is not, strictly speaking, a disease of the testicle itself, but an accumulation of fluid in the bag containing it. This fluid sometimes accumulates in very great quantity. It is very easily removed by puncturing the bag, but it is apt to gather again in as great quantity as before. The method employed by surgeons to prevent the re-accumulation of the

fluid, is to excite such a degree of inflammation in the inside of the cavity, as will cause the effusion of lymph, which makes the testicle with its fine covering to grow to the inside of the containing bag, and so to leave no cavity in which the water can accumulate. This curative inflammation is produced by injecting equal parts of port wine and water, and retaining it till some degree of irritation is produced. The fluid is then allowed to run off, and our attention is to be directed to preventing the inflammation from becoming too violent. Should this be threatened, we are to apply cooling lotions internally, to take away blood either generally or locally, and to give laxative medicines.

TETANUS. A painful and dangerous disease, often called the LOCKED JAW, from one of its most conspicuous symptoms. Tetanus occurs chiefly in warm climates, though it is by no means confined to them. It occurs as an idiopathic disease; but it not unfrequently follows wounds inflicted on some parts of the body, especially lacerated or punctured wounds. It also is a consequence of cold and moisture applied to the body when it is heated. In this case, the disease commonly makes its appearance within a few days of such application of cold; and the symptoms are the following. There is a sense of stiffness in the back part of the neck, which gradually increases, and renders the motion of the head difficult and painful. As this stiffness comes on and increases, there is an uneasy feeling about the root of the tongue, which uneasiness gradually becomes a difficulty of swallowing, and at last prevents it altogether. There frequently occurs a violent pain at the lower part of the breast-bone, stretching from thence to the back. When this pain arises, a strong spasm, especially of the muscles at the back part of the neck, draws the head strongly backwards. At the same time, the lower jaw is so strongly pulled up, that the teeth are closely set, and do not admit of the smallest opening between them; this is the *locked jaw*, and it is often the principal part of the disease. The spasms are now more frequently repeated, with great pain; and sometimes so many muscles are thrown into violent spasms, that the whole body is bent forcibly backwards. The muscles of the abdomen are also strongly contracted, causing the belly to feel hard, like a piece of board. The disease going from bad to worse, the muscles of the body both before and behind are so equally affected, and so strongly contracted, that the body remains stiff and immovable. The spasms are attended with the most severe pain; and though the spasm and pain occasionally abate a few minutes, yet every ten or fifteen minutes they are renewed; and any attempt at motion of any kind gives occasion to the renewal of the spasms. In this violent and painful disease, there is most commonly little or no fever; the face is not flushed nor the pulse raised; there is not a great degree of thirst or heat of skin; often, indeed, the extremities are cold, and there is a cold clammy sweat over the whole body. There is not much affection of the head nor delirium, till towards the termination of the disease, when every function of the body is weakened. Vomiting sometimes appears at the beginning of the disease, but it is not a frequent nor a marked symptom. The bowels are generally torpid.

Treatment. Various have been the remedies employed in the cure of tetanus, but it is a disease of so formidable and dangerous a nature, that every plan has too frequently been known to fail. Bleeding to a large extent has been tried unsuccessfully; and the same may be said of the warm and cold bath, of blistering, the use of mercury, and a great variety of antispasmodics, all of which have been unavailing, with the exception of opium. This last substance has been given to an incredible extent, but too often without any benefit; it seems, however, to have retained its reputation beyond any thing else, and practitioners are still fain to have recourse to it. When a patient is

fairly seized with tetanus, the proper plan to follow is this. If he be young and strong, and be seen at the commencement of the disease, he ought to lose a considerable quantity of blood, to be put into the warm bath, and to have a strong purgative; as soon as the bowels have been thoroughly purged, he should begin to take opium, either solid or in the form of tincture, one grain every hour, or forty drops, increasing the quantity or the frequency of repetition according to the urgency of the symptoms. The remedies are to be vigorously applied without loss of time, as the jaws may soon be locked, so as totally to prevent the admission of any thing into the mouth, unless by the severe expedient of drawing some of the front teeth. Indeed, this is frequently quite necessary, in order to admit wine, broth, or other nourishment. If there is no possibility of getting food or medicine by the mouth, we are obliged to have recourse to clyster. Some have thought that tobacco clysters have the power of relaxing the severe spasm which constitutes tetanus; and like many other remedies, it has had its instances of success and failure; and where the danger is so great, and our means so uncertain, we are glad to try many expedients.

In warm climates, especially in the West Indies, children at a very early period after birth, from the fifth to the ninth day, are affected with locked jaw. The disease, as may be expected, is in them very dangerous. The warm bath, opium, and purging, are the principal remedies to be attempted. It is believed often to be owing to rude management of the navel-string; but this cause is probably not the true one.

TETTER. There are two kinds of what are called tetter, the dry and the humid, and of each of these there are several varieties.

I. The *Scaly Tetter*, the *Psoriasis* of Willan, exhibits more or less roughness and scaliness of the cuticle, with a redness underneath. Sometimes the eruption is diffuse and continuous, and sometimes in separate patches, of various sizes, and of an irregular figure. The surface under the scales is tender and irritable, and the skin is often divided by deep fissures. It is commonly accompanied by some constitutional disorder, and is liable to cease and return at certain seasons.

Causes. Some have a hereditary predisposition to tetter; women of a dry skin and languid circulation are subject to it; and it affects them more particularly after lying in, or during a state of chlorosis. In children, it is not unfrequently produced by the many sources of irritation to which they are exposed. It is observed in both sexes, connected with gout; and in those who are predisposed to this eruption, slight occasional causes appear to excite it; such as being overheated by exercise, the unseasonable employment of the cold bath, a copious use of acid fruits, vinegar, or crude vegetables, and some peculiar mixtures of food.

Treatment. In the commencement of the eruption, when it appears suddenly, and the constitution is obviously disordered, a moderate antiphlogistic treatment must be pursued. A gentle purgative should be administered, and the diet made light, by abstracting every thing stimulant. This regimen, indeed, is requisite throughout the course of this disease, which is immediately aggravated in sympathy with irritation of the stomach, whether by spices, fermented liquors, pickles, or vegetable acids; whence the disuse of these articles contributes materially to its cure. In the early and inflammatory stages, even the mildest substances irritate the skin and aggravate the distress of the patient. A decoction of bran, a little cream, or oil of almonds, sometimes produce ease; but the admixture of the preparations of zinc or lead is commonly detrimental. If the constitutional disturbance has subsided, the internal use of carbonate of potash, with an infusion of bark, together with tepid washing with simple water, or milk and water, will gradually remove the complaint.

II. The *Humid or Running Tetter*, the *Impetigo* of Willan, is characterised by the appearance of small pustules. It is not accompanied by fever; it is not contagious, nor communicable by inoculation. It occurs chiefly on the extremities; the most common variety appears in circumscribed patches, which are usually small and somewhat circular on the upper, and large, oval, and irregular on the lower extremities. The patches at first consist of clusters of yellow pustules, set close together, and surrounded by a slight inflammatory border; in a few days, the pustules break, and discharge their fluid; the surface is red and shining, as if it were stretched, but exhibiting numerous minute pores, from which a considerable thin discharge is poured out, accompanied with much troublesome itching, heat, and smarting. This discharge concretes partially into thin greenish scabs, from under which it still continues to ooze. In the course of three or four weeks, the scabs fall off, but are liable to be renewed, as well as the discharge.

Causes. It cannot often be traced to any obvious cause. A predisposition to it appears to be connected with the sanguine temperament, with a thin soft skin, and a relaxed and bloated habit of body. Certain seasons appear to have great influence on the disease, in those who are predisposed to it.

Treatment. At the commencement of humid tetter, it is useful to administer flowers of sulphur internally, in such quantities as not to induce purging; and if there is much irritability of the skin, a portion of soda, nitre, or carbonate of potash may be combined with it. Diligent washing with tepid water is at the same time to be employed. When more inveterate, it requires mercurial alteratives, as Plummer's pill, or calomel and rhubarb. The best ointments are those made with oxide of zinc or acetate of lead. When the irritability is less, the pitch ointment, or citrine ointment, diluted with five or six times its weight of lard, is often found to be very beneficial.

THEBAICA TINCTURA, and *Laudanum Liquidum*, are old names for what is now called *Vinum Opii*, Wine of Opium. It is made thus: Take of extract of opium, one ounce; cinnamon and cloves, both bruised, of each one drachm; sherry wine, sixteen ounces; macerate for eight days, and filter. Mr. Ware, the oculist, considers it as superior to every other solution of opium as an application in chronic inflammation of the eyes.

THERAPEUTICS. The general doctrines respecting the cure of diseases, and the action of classes of remedies, without discussing the properties of individual substances.

THERMOMETER. The well-known instrument which measures the intensity of heat by the property which that agent has of expanding bodies. The substances used in thermometers are mercury or spirits of wine. The degrees of heat are marked on a scale; and the division of the scale in most common use in this country is that of Fahrenheit of Leyden; in which, zero indicates the heat evolved during the melting of a mixture of salt and snow; 32° is the freezing point, and 212° the boiling one. The degrees of heat at which certain phenomena occur which are interesting in physiology or in the treatment of disease will be found in the Appendix, No. III.

THIRST. The instinctive feeling by which we are admonished of the necessity of taking liquids into the system, to repair the waste which the body has sustained, and to assist in the solution of the aliment. Hence, we are thirsty after excessive perspiration, and after the use of dry and salt food. The state of the stomach and its contents have much influence on thirst. It is also caused by nervous sympathy, as in severe pain or great terror. This sensation appears to reside in the throat and fauces; but it is not always connected with the dryness of these parts; as, in many cases, the tongue is perfectly dry, while little thirst is felt. In such cases, drink should be frequently offered, although the patient does not ask for it.

Thirst is borne with much greater difficulty than hunger. It is evidently much under the power of habit; those who frequently indulge in drink, increase the craving for liquids. Children should not be suffered to take drink every time the fancy strikes them.

The intensity of this sensation is morbidly increased in a great variety of diseases, especially in feverish complaints, of which it is one of the distinguishing symptoms. It is best relieved in fevers and other ailments by gruel, toast-water, or the vegetable acids or fruits.

THORACIC DUCT. A tube, into which the lacteals carry the chyle intended for the nourishment of the body. The greater part of this tube runs on the right side of the spinal column, within the chest; and it pours its fluid into the left subclavian vein, which crosses the upper part of the chest, to throw its blood into the great vessels near the heart.

THORAX. The anatomical name for the chest. *See* CHEST.

THORN-APPLE, the *Datura Stramonium*, celebrated of late for its power of curing asthma, when smoked like tobacco. *See* STRAMONIUM.

THROAT, INFLAMMATION OF, QUINSY, SORE THROAT, *Cynanche Tonsillaris*, *Angina*, are all names for an acute disease, of which the seat is in the mucous membrane of the upper part of the throat, and all the surrounding parts of the muscles which move the jaws. The tonsils, or almonds of the ears, are especially affected, and the inflammation extends to the pendulous *velum* of the palate, and to the uvula. Commonly, shiverings and other symptoms of approaching fever precede the affection of the throat, which is attended with pain and difficulty of swallowing, the pain sometimes shooting to the ear; there is also troublesome clamminess of the mouth and throat; a frequent, but difficult, discharge of mucus; and at an early period of the disease, the fever is fully formed. The inflammation and swelling are commonly most considerable at first on one tonsil; and afterwards, abating in that, they increase in the other. The disease is not contagious. When the disease is actively treated at an early period, it abates gradually, or is said to end in resolution; but very often it goes on to suppuration; and the pus which is evacuated is of the most fetid and nauseous kind. Very soon after the abscess breaks, great relief is obtained, and the pain and difficulty of swallowing cease.

Causes. The most frequent cause is cold, externally applied, particularly about the neck. It is chiefly the young and sanguine who are affected; and when a person has had sore throat once or more, he is very liable to frequent repetitions of it, so that the slightest exposure to cold, or getting wet feet, will bring on an attack of the disease. It occurs especially in spring and autumn, when vicissitudes of heat and cold are frequent.

Diagnosis. The principal point in the diagnosis of this disease is to distinguish it from the sore throat which attends scarlet fever; in some varieties of which the rash is inconsiderable, although the disease of the throat goes rapidly on to gangrene, accompanied with a destructive fever of the typhoid kind. The distinction between the two kinds of sore throat is of great importance, as it most materially influences our practice. It is, in general, easily made by proper attention. The smart fever, the difficulty of swallowing, and the bright florid redness of the parts, mark out the inflammatory sore throat with sufficient distinctness; and we are, in many cases, assisted, by observing the person affected to be often subject to the disease, which occurs soon after the application of cold. The dangerous and malignant sore throat is known by the dark and livid colour about the fauces, by the appearance of specks on the part, which rapidly spread and form sloughs; and by the circumstance of scarlet fever being the prevailing epidemic. The treatment proper in inflammatory sore throat would be destructive here. And it is probably the knowledge

that some sore throats are so dangerous, that makes many people much alarmed when a quinsy seizes themselves or any of their family.

Treatment. When sore throat is threatened, it may in many cases be prevented from coming forward, by using a strong astringent gargle. Of these, there is a great variety. As useful a one as can be made is that with diluted vinegar, a little sweetened with honey or sugar. The infusion of red rose leaves, acidulated with a few drops of sulphuric acid, forms a very elegant gargle. The same purpose may be served by gargling with strong spirits, or with the decoction of oak-bark, or diluted spirit of hartshorn not so strong as to hurt the mouth. A blister from behind the ear, extending under the lower jaw to the wind-pipe, will almost certainly prevent the internal disorder of the throat; but it must be put on at the early part of the disease, or it will do no good. If this is not done, the volatile liniment should be rubbed on the under jaw, below the chin. Sometimes leeches may be useful, but rarely a general bleeding is required. An emetic may be given at the commencement of the disease, but a saline purgative is better. Gargles must be used with incessant diligence as long as the disease continues. Jellies of preserved fruits, vegetable acids, or good sharp small beer, may assist the gargles in keeping the mouth clean and allaying the thirst; but the difficulty of swallowing is so great, that the patient is very apt to save himself the pain, and let the throat get dry. However, a resolute draught occasionally to quench the thirst, gives little more pain than swallowing the spittle. A little bit of sal ammoniac, or sal prunella, allowed slowly to dissolve in the mouth, is useful. Much relief is got by inhaling the steam of hot water, which may be impregnated with vinegar or any aromatic; and if there is a tendency to suppuration, this is a good way of ripening the abscess, which often forms in the tonsils. As the sore throat and fever are sometimes relieved by perspiration, the patient should keep his bed for a few days. Sometimes the swelling is so great that nothing can be swallowed, and the breathing is impeded. The tonsils have been scarified, or the abscess has been opened, and the operation of opening the wind-pipe may be sometimes required. Happily those very violent cases are of rare occurrence.

THROAT SORE, *Malignant and Putrid.* *See* SCARLET FEVER.

THROMBUS. A dark-coloured swelling under the skin, occasioned by the blood getting out of the vein in bloodletting, and diffusing itself a little way round in the cellular substance.

THRUSH, SORE MOUTH, *or Aphthæ.* A disease very common to infants within the first month, though it may occur later. It consists in small white specks on the tongue, inside of the cheeks and fauces, with more or less derangement of the stomach and bowels. There are two forms of this disease; a milder one, in which the affection of the mouth is slight and the constitutional symptoms not severe; and another form, in which both the local and constitutional symptoms are rather violent. In the milder form, a few scattered spots appear on the tongue, in the mouth, or within the lips, like little bits of curds; these soon become yellowish and fall off, leaving the parts below of a red or pink colour. The spots may be renewed several times. The bowels are somewhat deranged, griping or purging occurs, the stools are greenish, ill smelled, and containing portions of undigested milk. The child is fretful, and the mouth is rather warmer than usual, but there is no general fever.

The other variety of the disease begins with great oppression and feverishness, sometimes with fits and violent screaming. When the spots begin to appear, the feverish symptoms are mitigated a little, but do not go off entirely; and it would appear that the ulcerations are not confined to the mouth, but go through the whole alimentary canal, causing severe pain, vomiting, griping, and purging;

and the matter discharged is so acrid, as even to produce excoriation of the parts about the anus. The mouth is very tender, and the child sucks with pain and difficulty. The aphthæ in a little time fall off, but they may be renewed, and the affection of the bowels often gets much worse.

Prognosis. When the vomiting is frequent, when the stools are thin and the belly is tender, we regard the case as very unfavourable; and drowsiness, spasms, and languor, with frequent pulse, are also dangerous symptoms. With respect to the mouth, if the spots are few and separate from each other; if they become yellowish and fall off in three or four days, leaving the parts below clean and moist, we may expect that the eruption will not be renewed. But if the aphthæ turn brown or black, the prospect is not so favourable.

Causes. The disease appears to be sometimes brought on by giving to very young infants food or liquids too sweet, and too hot. The stomach and bowels of infants are peculiarly delicate, and the mouth sympathizes very readily with the derangements of those parts. Exposure to cold and damp has also a tendency to bring on this disease; and aphthæ occur in the adult inhabitants of northern climates, where there is continual moisture of the air, or where the soil is marshy.

Treatment. As the disease frequently arises from acidity of the stomach, a little magnesia should be given as a corrective, or the chalk mixture, in the dose of a tea-spoonful every two hours, to infants within the year, or larger doses to those who are farther advanced. No force must be used to displace the curd-like specks; and the patient must not get any thing too warm, salt, or otherwise pungent. Mild cooling substances may be applied to the mouth, as powdered borax mixed with a little honey, or a weak solution of alum, weaker than what a sound mouth could bear. In bad cases, when the aphthæ appear dark, and the strength is much diminished, we must use port wine and the decoction of bark as a wash for the mouth; and bark should be given internally in the form of the sulphate of quinine; from one to two grains may be taken every four hours. The strength must be supported by nourishing clysters of milk or soup, if the patient is unable to suck, or to take food properly by the mouth. We cannot pronounce confidently on the patient's safety, till he is again able to suck. From the tendency of mercury to affect the glands of the mouth, it is better to avoid giving any form of it as a purgative.

THYMUS. A gland situated on the fore-part of the wind-pipe, the uses of which are not known. It is larger in the embryo than in the adult, and in Alpine regions is often swelled, forming the goître, or wen of those countries.

TIC DOULOUREUX. A very painful affection of the nerves of the face, chiefly those branches of the fifth pair, which are distributed on the forehead, cheeks, and upper and lower jaw; and the *portio dura* of the seventh pair, which is ramified on the face and adjacent parts. Other nerves of the body are sometimes affected with tic douloureux, as in the thigh, leg, arm, and female breast. The face is by far the most generally affected. There is very acute pain below the eye of one side, at the nose, the upper lip, and the teeth and gums. Sometimes the pains are sharp from the first; in other cases, there is a dull and constant pain till the disease is fully formed. The pain comes on in paroxysms of the most violent kind, sometimes without any precedent cause to awaken the fit, at other times the attempt at shaving, eating, or speaking, or a slight gust of wind, or even drawing the hand along the face, will excite it. The pain is of the most exquisite and agonizing kind. The duration of each paroxysm is from a quarter to half a minute; several of them may occur in the course of five minutes, but in general the respite is longer. Women are more frequently attacked than men;

and it most frequently occurs in persons of middle age.

Causes. The causes are unknown. Mr. Abernethy thinks it a disorder as much constitutional as gout or rheumatism. He says, "I have known patients recover either spontaneously, or in consequence of remedies which were calculated only to relieve or counteract nervous irritability." It is probable, that tic douloureux is sometimes a sympathetic affection, and sometimes a primary disease.

Diagnosis. This affection is distinguished from rheumatism, by the extreme violence of the pain, and by the shortness of its duration, by its being excited by very unlikely causes; and by the absence of fever. From megrim, it is distinguished, by its following the course of certain nerves almost entirely; and from toothach, it may be known by the paroxysms being short, and succeeding each other rapidly, by the freedom from pain during the interval, and by the pain of tic douloureux being superficial and lancinating, while that of toothach seems to strike deeper.

Treatment. Many plans have been proposed, and as yet there is none on which we can certainly rely. Frictions with stimulating or anodyne liniments are to be tried in the first instance. The nerve has been divided below the eye, where it passes out through the infra-orbitary hole. Of late it has been thought, that the carbonate of iron is useful in the tic douloureux. It is given in the dose of one drachm three times a-day; in some cases recorded by Mr. Hutchinson of London, who first employed it, twenty grains were administered every third hour, day and night; and in one instance, it was taken to the extent of seven scruples, thrice a-day. Some cases yielded to the carbonate of iron in three or four days; but others required its use for six months, before any impression was made on the disease. The carbonate of iron, like all other means, sometimes fails; but there are sufficient instances of success to warrant our confidence in it as a valuable remedy in this very painful malady.

TIN is sometimes used for the purpose of expelling worms from the intestines. It is used in its metallic form, reduced to a very fine powder. The dose is from one to two drachms, and it is thought to act merely by its mechanical properties disturbing the worms, and by its bulk and roughness carrying them before it. It is now very little used.

TINCTURE. Certain active ingredients, chiefly of various vegetable substances, are imparted to alcohol either entire or diluted, and these spirituous solutions are called tinctures of the substances employed. Thus, a solution of gum guaiac in alcohol is called tincture of guaiac; and opium dissolved in proof spirit is called the tincture of opium. Tinctures are an excellent mode of administering a great variety of medicines; only we must take care that the spirit have not a contrary effect to that produced by the medicine. Thus we may wish to lessen the action of the system by purging, and perhaps may think of employing the tincture of senna; but the spirits necessary to form the tincture, may do more harm than we could get good, by the evacuation produced by the senna.

TINEA CAPITIS. *See* SCALLED HEAD.

TOAST-WATER is water impregnated with the soluble part of toasted bread, and it agrees frequently with persons whose stomachs do not relish pure water. Hard biscuit reduced by fire to a coffee-colour, has been recommended as the best for making toast-water. It should be drank as soon as it has cooled, as it acquires an unpleasant flavour by keeping. It has a slightly nutritive quality, and may be allowed in all the feverish and other cases, where diluents are proper.

TOBACCO, *Nicotiana Tabacum.* A well known plant, which derives its generic name from Nicot, a French ambassador, and its specific name from the island of Tobago, whence it was brought in 1560

It is at first nauseous and disgusting; but in one or other of its forms, it has become one of the most generally used articles of luxury, exhibiting a remarkable illustration of the wonderful power of custom, in reconciling us to those things which are at first most disagreeable. Tobacco has fascinated all ranks of men, and the natives of every climate. An English monarch assailed it with a "Counterblast;" but it is now one of the most copious sources of revenue to the governments of Europe. After the decisive battle, which terminated the public career of the Great Captain and Legislator of our age, it is amusing to observe how carefully it was stipulated in the treaty with France, that she should supply tobacco to the victors who were to occupy her territory.

The attractions of tobacco seem to be owing to its narcotic properties, by which irritability is soothed, and serenity induced, as by opium and some other substances. In large quantities, and in those who are unaccustomed to it, stupor, giddiness, nausea, and vomiting are produced. Like other narcotics, when much indulged in, it weakens the digestive powers; but candour obliges us to say, that the instances in which it is seen to produce this effect, are much fewer than what we might from theory expect. Thousands of the consumers of tobacco live totally exempt from all dyspeptic symptoms.

The *chewing* of tobacco increases the flow of saliva, and the tobacco thus dissolved in it is pretty copiously swallowed. In *smoking*, the oil of tobacco is separated, and is applied to the fauces and lungs in a very active state. The same slight intoxication is produced by smoking as by the other forms of using tobacco. Smoking is still forbidden in the drawing-room; but in the form of *segars*, or the leaf in perfection, rolled up, it is now beginning to be used by those who think they have a right to be there.

Snuff, or the powder of tobacco, is said to have numerous additions made to it in the manufacture, which are kept secret. When taken into the nostrils, it increases the flow from the mucous membrane, and may thus relieve some disorders of the head. Part of the snuff usually taken, probably gets down into the stomach, by the back part of the nose and mouth. The violent sneezing which snuff, and other errhines, sometimes occasion, may obstruct the return of the venous blood from the head, and so produce inconvenience or danger.

It has been a subject of popular inquiry, says Dr. Paris, how far the habitual use of snuff may prove beneficial or injurious; and whether the habit, when once fully established, can be discontinued with impunity? It may be remarked, that snuff, by habitual use, soon ceases to produce the effect of an errhine, or promoter of the discharge of fluid from the nose; for which reason, its discontinuance cannot generally be regarded as likely to be attended with any danger; in those cases, however, in which the discharge is perpetuated, a contrary judgment should be pronounced, for all artificial discharges become constitutional by long continuance, and can therefore be seldom checked with impunity. Dr. Cullen states, from experience, that whenever the nasal discharge has been considerable, the laying aside the custom of taking snuff has been productive of evil.

As an article of medicine, tobacco is chiefly remarkable for its nauseating and relaxing effects; and to obtain these effects as a means of reducing the bowels in cases of rupture, tobacco is given in the form of clyster, in the strength of one drachm infused in an English pint; one half of which is employed at once, very commonly with the effect of producing very great relaxation; favourable indeed to the reduction of the rupture, but often occasioning very dangerous, and sometimes fatal depression of the system, especially if the patient has been weakened by severe suffering. For these reasons, tobacco should never be administered for this purpose, except in the pre-

sence, and under the direction, of an experienced medical man.

An oil of tobacco, of a most powerful nature, may be obtained by distilling the leaves, and separating it from the water, on the top of which it floats. The leaves applied to the pit of the stomach as a cataplasm, produce vomiting. The powder mixed in butter has been used in some skin diseases; but even applied externally, has occasioned giddiness, vomiting, and fainting. The juice of the green leaves instantly cures the stinging of nettles. The smoke has been thrown into the rectum with advantage, in iliac passion and hernia; but although the same practice has been advised in the recovery of the drowned, it is more likely to extinguish life than to restore it. The smoke kills the small white worms within the anus, called ascarides.

TONICS. Medicines which are thought to increase the tone or strength of the moving powers. The muscles and muscular fibres, as also the blood-vessels, cannot act unless they are in such a state of temper or *tone*, as it is technically called, that if cut asunder, the two ends would retract from each other; and when this tension is wanting, debility ensues. Tonics are those medicines which, by their continued use, restore this healthy state. Some of the most remarkable tonics, as the vegetable bitters, do good by their influence on the digestive organs, and by sympathy with these, on the whole system. The bitter principle of vegetables is absolutely necessary for the health of animals which feed on them, as is shown by the debility and death which cattle suffer when confined to food which has not a sufficiency of it. The good effects of some malt liquors on the human stomach are owing to the bitter contained in them. Tonics are chiefly useful in chronic weaknesses, and in recoveries from debilitating diseases. The chief of them are, the vegetable bitters, bark, and the various preparations of iron.

TONGUE. The tongue is subject to various diseases, as tumours, ulcerations, and affections resembling cancer. Sometimes very troublesome ulcerations proceed from ragged or sharp projections of the teeth, and will not heal under any application till the teeth be extracted, or till the irritating parts be filed down. Tumours occasionally arise in the tongue, from the morbid enlargement of some of the nervous papillæ; they are to be removed by putting a ligature round their base, or by cutting them out. Sometimes the bleeding, from such operations, is very alarming, and requires to be stopped by the application of a hot iron. In affections of the tongue, which are truly cancerous, there is no remedy to be depended on, except the complete removal of the part, if practicable.

The appearance of the tongue gives pretty certain indications of the state and action of the stomach and digestive powers. When it is white and milky, it announces general irritation. When brown or dark-coloured, we judge that there are congestions in the first passages, or that the secretions are vitiated; and when it is unusually bright and shining, it indicates a degree of fever, probably connected with some diseased state of the inner coat of the stomach and intestines. There are some cases where the tongue appears pretty clean, but the skin has not its natural colour and transparency; this generally happens when the secretions have been for a considerable time in an unnatural state.

TONGUE-TIED. The tongue is fixed down to the lower part of the mouth by a membranous cord, which prevents too great a degree of motion. Sometimes the cord ties down the tongue of infants so much that they cannot suck. This is supposed by the common people to be the case much oftener than it really happens; and they very often request the surgeon to remove the inconvenience; but so long as the patient sucks, there is no occasion for any operation. But it happens sometimes that the tongue is not perceived to be tied till the child begins to articulate, and is prevented from forming certain

letters for which a free motion of the tongue is requisite. At whatever time the operation may be necessary, it is easily done with a pair of scissors; but the surgeon must be careful not to wound any of the neighbouring large vessels.

TONSILS. Glands situated at the back part of the mouth; when inflamed, they are the seat of the common inflammatory sore throat. Sometimes the tonsils become enlarged, obstructing the breathing, and requiring to be extirpated by a surgical operation, either by the knife or by ligature. In some persons, especially those who are scrofulous, the tonsils are habitually larger than common; and are apt to swell and be painful on the slightest exposure to cold or damp. They should frequently use astringent gargles.

TOOTHACH. A painful affection, generally arising in a carious tooth, from the air getting admission to the nerve. The pain is not confined to the tooth where it originates, but extends to other branches of the nerves, and frequently affects the whole of one side of the head. Toothach seems to partake of the nature of rheumatism, and it is one of the most annoying and distressful ailments to which we are subject. It commonly arises from cold, or from some sweet or acrid substance getting into a hollow tooth, or from the patient incautiously using the affected side in chewing.

Expedients for the relief or cure of Toothach. If the disease originates in a hollow tooth, we may put in a bit of solid opium, or a little laudanum, or camphorated spirits of wine, upon cotton; or strong spirits. The following may also sometimes be of use: camphor dissolved in nitric acid; burnt alum in nitrous ether; essential oil of cloves or thyme; tobacco steeped in whisky. A blister behind the ear, or scarifying the gums, or applying a leech to them, often gives relief in toothach. If the tooth be not very much decayed, the nerve should be destroyed by the application of hot iron; and the hollow part being filled up with tinfoil, the tooth may long continue serviceable.

The effectual and permanent cure of toothach consists in pulling out the tooth; but as it may happen that many are affected at the same time, and as it would be inconvenient to part with them all, it becomes necessary to employ blisters, stimulants, and other palliative means, to try if we can relieve the disease without stronger measures. Sometimes toothach is an affection symptomatic of pregnancy; and in that case we must be very cautious how we advise the extraction of the teeth, as it occasionally happens from the irritable and delicate state of the frame at that time, that miscarriage is the consequence of drawing a tooth.

TOR QUAY is a large village on the coast of Devonshire, situated in a cove of Torbay. The climate of Tor Quay is drier than that of the other places on the south-west coast of England; it is almost entirely free from fogs, and has a pleasant bracing air. Persons intending to confine themselves to the town, and to the cove in which the town and harbour are situate, may lay their account with being as entirely sheltered from all the piercing winds of winter as they can be anywhere. Nervous patients would probably derive much benefit from a residence at Tor Quay. The varied scenery, the opportunities of enjoying boat-exercise and sea-breezes in safety, which is not the case at Sidmouth, the objects of curiosity, as well as of natural beauty to be seen in the neighbourhood, and the interest given to the walks along the beach, from the variety of interesting specimens of fossils and ore to be met with at every step, render it a situation very desirable for invalids, for whom change of air and a succession of agreeable objects are recommended as probable means of cure. In summer, the heat at Tor Quay is generally supposed to be intolerable; but this objection may be obviated by removing from Tor Quay to the village of Tor, about a mile and a half distant, where accommodation may easily be had. For some years past, Dr. Abercrombie has

sent several patients, with affections of the chest, to spend the winter at Tor Quay, where there is excellent accommodation for invalids, and which is easily accessible. The journey is not long in crossing the country from Bath or Bristol; and the access by sea from the Channel is easy. He has had much reason to be satisfied with the result; and, he observes, that should farther observation show that the climate of these districts will really bear a comparison with the climates of the south, it is always to be kept in mind that it presents other advantages to the invalid, in which none of them can compare with it for a moment; an easy journey, British accommodations and comforts, British society, and British physicians.

TOURNIQUET. An instrument for compressing an artery, so as to prevent the flow of blood into it for a time, till some surgical operation is performed, or till other methods are taken to obliterate the artery, if the closing of it is wished to be permanent. It is only to the limbs that the tourniquet can be applied. The first tourniquet proposed was a very simple contrivance: it was the same that carriers employ to tighten the ropes that fasten the goods on their carts. A small pad was placed on the artery which was intended to be compressed, and a band was applied over it so as to encircle the limb twice. A stick was introduced between the two circles of the band and twisted; thus any degree of compression could be applied to the limb and to the artery. Tourniquets of this description having a pad to press on the artery, are useful in actions by sea and land, for stopping discharges of blood, till more regular and deliberate measures can be followed, for the relief of the wounded. The tourniquet was much improved by M. Petit, a French surgeon, who, in the year 1718, presented to the Academy of Sciences a tourniquet, in which he combined the circular band with a screw, so that the greatest pressure is not made on the whole limb, but on the principal artery. In modern times, the tourniquet has been still farther simplified and improved. Expert surgeons, when they can procure skilful assistants, prefer their manual aid to the use of the tourniquet.

Many years ago, Dr. Kellie, by placing the tourniquet over the iliac arteries, for a time altered the distribution of the blood, so as to produce the shortening of the cold stage of intermittent fever.

TRACHEA. The anatomical name for the wind-pipe.

TRAGACANTH. A sort of gum employed in pharmacy for making powders into troches, and for some other purposes. It is not so extensively used as gum arabic, though it forms a more tenacious mucilage.

TRAINING. Among the nations of antiquity, distinguished by their genius and political sagacity, it was a great object with their lawgivers and statesmen, to direct the education of youth, so as to produce in them the greatest possible aptitude for war. To this end, most of their celebrated games were directed; and the combatants in these, while they afforded to the moral philosopher examples of patriotic and generous emulation, furnished also to the painter and the statuary the finest models of the human form, and to the natural historian some curious results of the effect of external agents, in promoting the growth and activity of the animal economy. It may be stated in general terms, that the efforts of the *athletæ* were directed to regulate their diet, exercise, and sleep, in such a way as to produce the greatest possible strength of action and power of endurance; and we have the testimony of an inspired writer, that they who were ambitious of a crown in the Grecian games, "were temperate in all things." In our own country and time, this art of bringing up the human constitution to its highest pitch of muscular vigour, and capability of enduring fatigue, pain, and hardship, has been brought almost to a science; and though the ends are far from sublime or virtuous, being principal-

ly those of prize-fighting, or walking for a wager, the whole process, and its results, present some curious facts in physiology.

It is hardly necessary to say, that a person whose original stamina are feeble or diseased, cannot, by any course of diet or regimen, bring himself up to the athletic standard; and that the subjects of *training* must have already some considerable degree of health and vigour. At the commencement of a course of training, it is generally thought advisable to clear the coast for further operations, by an emetic of ipecacuan in powder, and by a purgative medicine repeated two or three times in the first week. The colocynth pills, or two grains of calomel with five of the extract of colocynth, answer very well. The great point is to regulate the diet, and to give such food, as is at once nutritive and easily digestible. As we have repeatedly stated in different parts of this work, animal food is the most nourishing, but requires a due proportion of vegetable aliment, to prevent bad effects on the constitution. Beef, mutton, and venison are the most easily digestible kinds of meat; the young of animals, as veal and lamb, and fat oily food, as pork, are deficient either in their powers of nutrition or digestibility. The vegetables to be taken are potatoes, brocoli, or turnips. Stale bread is preferable to new. Pastry, pies, and puddings are to be avoided, and all the varieties of spices and sauces. Vinegar and salt are the only condiments allowed. The quantity of food cannot be specified; it must vary with the constitution of every individual.

The drink allowed in training is home-brewed malt liquor, as being nutritive in itself, and assisting digestion by its vegetable bitter. If wine is taken, it is in moderate quantity, and white is preferred to red. Spirits in any shape, either plain or diluted, are never allowed.

The most essential particular in the art of training, is to regulate the exercise, and to take plenty of it. Both within and without doors, exercise of various kinds must be taken. Walking, riding, fencing, quoits, tennis-ball, the dumb-bells, may all be practised. As long as the perspiration is moderate and not debilitating, exercise may be persevered in from four to six hours a-day, with the most decided increase of general health and muscular vigour. Pure air is an essential requisite. The noviciate in training is recommended to go to bed early and to sleep from seven to eight hours.

The above precepts contain the principal means for raising the body to its highest health and perfection; and the diligent practice of them must, as experience testifies, have the best effects on the expansion and motions of the chest, on the function of digestion, and on all the secretions and excretions of the body. The purposes for which training is generally employed, viz. to fit the subject of it for boxing or pedestrianism, naturally cause it to be regarded with disgust by every virtuous and well-regulated mind; and the brutal habits and gladiator-like propensities of the pugilist, are not calculated to recommend his education to those, who have better objects of pursuit than the mere possession of health and strength. Even when the highest health is attained, it is a point at which the constitution will probably not continue; but by causes apparently very slight it may fall into inflammatory or other diseases. The strict and regulated exercise and temperance necessary during a course of training, cannot be continued for a very long time; and for those whose health is an object, not for its own sake, but as the means of duty and usefulness, the advice of Celsus is very judicious. He recommends a person in health to bind himself by no rules, but to be independent altogether of the regular physician, and the anointer of the body with oil. Such a one should be sometimes in the city, sometimes in the country; should vary his exercises, and use all kinds of food; should sometimes abridge his diet, and sometimes enlarge it; and thus, in the ever-chang-

ing circumstances of humanity, he is fitted for bearing whatever inconveniences external accidents may bring upon him. This is certainly far better than living in a balance like Sanctorius, or cutting our mutton into triangles like the philosophers of Laputa; and we may say on this, as on every other occasion,

Nunquam aliud Natura, aliud Sapientia dixit.

TREPHINE OR TREPAN. An instrument used in surgery to remove a portion of the skull. "It consists of a simple cylindrical saw, with a handle placed transversely like that of a gimblet; and from the centre of the circle which the teeth of the saw describe, a sharp little perforator projects, named the centre-pin. Its use is to fix the trephine, when it is first applied; that is, before the teeth of the instrument have made a sufficient circular grove, in which they can steadily work. When this has been accomplished, the centre-pin must always be removed; because, if left, it would now retard the operation, and wound the brain and its membrane, when the teeth of the saw had cut to a certain depth through the skull." (COOPER'S *Surgical Dictionary*).

By removing a portion of the skull by means of the trephine, an outlet is afforded for blood or matter effused within the skull, and lying upon the membrane of the brain. By this operation, we also get a fulcrum for our elevator, when it is necessary to raise any depressed portion of bone, which is driven in upon the brain. After the operation is completed, the flaps of the scalp are to be laid down, and the whole is to be covered with a little lint, spread with simple ointment. The dressings should be very light, and the bandages should make no injurious pressure. We must be on our guard against the coming on of inflammation, and must prevent it by using purgatives and antimonials; or employing blood-letting, if necessary.

TROCAR. The name of a surgical instrument having three sides and a sharp point, used for perforating.

TROCHES, and lozenges are composed of powders made up with glutinous substances into little cakes, and afterwards dried. This form is principally made use of for the more commodious exhibition of certain medicines, by fitting them to dissolve slowly in the mouth, so as to pass by degrees into the stomach, or to act upon the pharynx and top of the trachea; and hence these preparations have generally a considerable proportion of sugar, or other materials grateful to the palate. The lozenges of the confectioner are so superior in elegance to those of the apothecary, that they are almost universally preferred. (Dr. DUNCAN'S *Edinburgh Dispensatory*).

TRUSS. An apparatus or bandage, with a spring or other contrivance, to press upon the openings where a rupture appears, and so keep it from coming down. Trusses are of great utility when they are properly fitted, and when they do not press where they ought not. Many persons pass through a long life without any inconvenience, who, but for the aid of a truss, would in all probability have been afflicted with irreducible or strangulated hernia. Trusses must be fitted by the artist to the shape of the person who is to wear them, and according to the place which is to be guarded. Even children, when they are not very young, may be made to wear them. *See* RUPTURE, *page* 477.

TUBERCLE. A small swelling which occurs in various parts of the body. The nature and formation of tubercles is not well understood. The most noted are those which are found in the substance of the lungs. *See* CONSUMPTION, *page* 146.

TUMOURS, swellings of various kinds. *See* WEN, *and* SWELLINGS.

TUNBRIDGE WATER. A chalybeate water found at Tunbridge in Kent. Its general operation is to increase the secretions in a gradual uniform manner, and to impart tone to the system. It is serviceable in complaints accompanied by indigestion and flatulence; and in the vari-

ous complaints of debility incident to the female sex. On the first use of the water, there sometimes occurs flushing of the face, drowsiness, and an uneasy distension of the stomach. These effects are to be prevented by previous attention to the state of the stomach and bowels. Active exercise should be taken immediately after the water, as this occasions a general glow of warmth, prevents it from oppressing the stomach, and also tends to produce its rapid absorption, and promote its good effects. The bowels generally become bound, and require the assistance of medicine. Such medicine is best taken in pills, at bedtime, as those of aloes with myrrh or colocynth. Tunbridge water is taken at two or three times, beginning at eight o'clock in the morning, and ending at noon; the dose each time is from half a pint to three quarters, varying according to the age, sex, and constitution of the patient, and according to the length of time during which the waters have been drank; as, like many other things, their efficacy is diminished by use. The external use of the Tunbridge water is recommended in various cutaneous diseases, especially those of a scaly kind, and which are connected with disorders of the stomach and digestion. The most favourable period of the year for visiting Tunbridge Wells is from May to November.

TURMERIC, *Curcuma longa*, the plant from which curry powder is obtained. It is now disused in medicine.

TURNIPS, *Brassica rapa*. A well known and useful esculent root; forming an agreeable article of diet, to be taken along with animal food, and furnishing to invalids an excellent mild nourishment, when there is nothing in the state of the stomach and bowels to forbid vegetable diet. Turnips should be well boiled, and have the water pressed out of them.

TURPENTINE. A liquid resinous substance, obtained from various species of the pine tribe. The oil of turpentine is obtained by distilling turpentine, when this volatile oil rises. The oil of turpentine has of late been successfully used for expelling the tape-worm. The dose is from an ounce to an ounce and a half; it has even been given to the extent of four ounces at once, without any perceptible bad effects, or more inconvenience than would follow from an equal quantity of gin. It generally acts as a speedy purgative, and discharges the worm, in all cases dead. In obstinate constipation, it is of singular benefit. In inflammation of the bowels, colic, and various spasmodic affections of the viscera of the abdomen, oil of turpentine has been given with excellent effect, both by the mouth and by way of clyster. Turpentine is given in affections of the urinary organs, in doses of from ten drops to a drachm. Oil of turpentine is applied externally either alone or mixed with olive oil, to indolent tumours and paralytic limbs. It is applied also as a styptic to stop bleeding; and some practitioners use it in burns and scalds, which last use we are certainly not inclined to recommend. In cases of deafness from deficiency of wax, a portion of a mixture, made by adding ten drops of turpentine to an ounce of almond oil, may be introduced into the ear upon a little cotton.

TUTTY. The oxide of zinc, a dry powder, used to prevent excoriation in children, at the folds where surfaces are apt to come in contact, as the groin, the arm-pits, behind the ears, &c.

TYMPANY. A swelling of the abdomen, occasioned by wind in the intestines, or in the cavity of the belly. Intestinal tympany is supposed to arise from the sudden suppression of diarrhœa or dysentery, from the striking in of cutaneous diseases, and from the use of vegetable aliment occasioning flatulence. It sometimes comes on suddenly, at other times insidiously; and is preceded by rumbling in the bowels, and discharges of wind upwards and downwards; it is generally attended with colic pains. The belly retains its figure under every change of posture; and the swelling does not

yield much to pressure. In the advanced stage of the disease, there is sometimes suppression of urine, and sometimes retention of it. The body is generally costive, the appetite impaired; and heat, thirst, and other febrile symptoms attend. At length the breathing becomes difficult, the strength is exhausted, the belly very much distended, and the patient is carried off by mortification supervening.

Treatment. We are to attempt to procure the discharge of wind from the intestines, by giving carminative medicines, as the oil of anise or of peppermint, or powdered cinnamon with camphor, and employing clysters with assafœtida and the oil of caraway. Purgative medicines are to be given, always adding something which will have the tendency to expel wind. If we do not succeed in getting the bowels opened, and wind discharged, and if there be heat, thirst, and threatening of fever, we must have recourse to bleeding, in order to prevent inflammatory symptoms. To renew the healthy peristaltic motion of the bowels, which is suspended in tympany, cold has been applied externally, and in some instances with good effect. If we succeed in removing the disorder, the patient must be very cautious afterwards not to use flatulent and indigestible food.

Tympany of the cavity of the belly commonly arises from some erosion of the intestines, allowing the escape of air from them into the general cavity, and is to be considered as a hopeless case.

TYPE. The character or distinctive circumstances of certain diseases, as of fevers and agues. Thus we speak of a fever being of the intermittent, remittent, or continued *type*.

TYPHUS. One of the names of continued fever. *See* FEVER.

U

U L C

ULCER. A chasm or vacancy formed on the surface of a part, whether external or internal, by the absorbent vessels removing parts back into the system. Ulceration takes place more readily in the cellular and fatty substance, than in muscles, tendons, blood-vessels, and nerves. There are many varieties of ulcers, requiring a corresponding variety of treatment.

SIMPLE PURULENT ULCER. Some ulcers are covered with matter of a white colour, of a thick consistence, and which readily separates from the surface of the sore. There is a number of little eminences called granulations, which are small, florid, and pointed at the top. As soon as they have risen to the level of the surrounding skin, those next the old skin become smooth, and are covered with a thin film, which afterwards becomes opaque, and forms skin. The principal

U L C

thing to be done in the treatment of this kind of ulcer, is to keep the surface clean, by putting on a little dry lint, and a pledget over it, covered with very simple ointment. In some patients, ointment irritates and inflames the neighbouring skin. Bandages sometimes irritate the sore, and disturb the healing process; but when they do not, they are useful in giving a moderate support to the parts, and in defending those that are newly formed.

ULCERS *in Weakened Parts.* Other ulcers are in parts which are too weak to carry on the actions necessary to their recovery. In them, the granulations are larger, more round, and less compact than those formed on ulcers in healthy parts. When they have come up to the level of the healthy parts, they do not readily form skin, but rising still higher, lose altogether the power of forming it. When

the parts are still weaker, the granulations sometimes fill up the hollow of the ulcer, and then are suddenly absorbed, leaving the sore as deep as ever. Ulcers are very much under the influence of whatever affects the constitution; and change of weather, emotions of the mind, and some other agents, quickly occasion a change in their condition. Such ulcers as we have been describing, require general as well as local treatment; bark, wine, porter, and other cordials and tonics are to be given; and the granulations are to be kept from rising too much, by the prudent application of blue vitriol, lunar caustic, and the like, weakened sufficiently by proper admixture of ointment to act as stimulants, and not as caustics. This will give a proper and healthy action to the granulating surface; whereas the destroying of the rising parts by escharotics seems rather to encourage the growth. Bandages and proper support to the parts, are highly useful. These ulcers, in weak parts, do not seem to be the better of poultices, or other relaxing applications; powders rarely do good, and perhaps the best dressing is the citrine ointment, more or less diluted.

Irritable Ulcers. There are certain ulcers, which may be called *Irritable Ulcers*. The margin of the surrounding skin is jagged, and terminating in an edge which is sharp and undermined. There is no distinct appearance of granulations, but a whitish spongy substance, covered with a thin ichorous discharge. Every thing that touches the surface gives pain, and commonly makes the ulcer bleed. The pain sometimes comes on in paroxysms, and causes convulsive motions of the limb. Such ulcers seldom do well, without a frequent change of treatment. Fomentations with poppy heads, chamomile flowers, or hemlock leaves, are sometimes of use in irritable ulcers. When poultices are prescribed, they should never be allowed to rest or bear weight on the sore limb. Powdered applications are generally too stimulating for irritable ulcers, and bandages also prove hurtful.

Indolent Ulcers are those which have the edges of the surrounding skin thick, prominent, smooth, and rounded. The surface of the granulations is smooth and glossy; the matter is thin and watery, and the bottom of the ulcer is nearly level. A great proportion of the ulcers in hospitals are of the most indolent kind. Indolent ulcers form granulations, but frequently they are all of a sudden absorbed, and in four and twenty hours, the sore becomes as much increased in size as it had been diminished for many weeks. The principal applications required for indolent ulcers are those of a stimulating nature, as the basilicon ointment, and occasional sprinkling with red precipitate. Pressure is to be made by a roller, and by slips of adhesive plaster. Scrofulous, syphilitic, and cancerous ulcers are to be treated according to the methods laid down under these various diseases.

UPAS, the famous poison of Java, concerning which, and the wide-spreading desolation of the tree that produces it, so many fabulous stories have been reported. "The Strychnos Tieuté, is the plant which yields the Upas Tieuté, one of the Javanese poisons. It has been analysed and found to contain strychnia, and to be almost as energetic as strychnia itself. Dr. Darwin has given an account of its effects on the Javanese criminals, who used formerly to be executed by darts poisoned with the Tieuté. I believe the account is not very authentic; yet it accords precisely with what would be expected from the known properties of the poison. He says, that a few minutes after the criminals are wounded with the instrument of the executioner, they tremble violently, utter piercing cries, and perish amidst frightful convulsions, in ten or fifteen minutes." (Christison *on Poisons*).

The Upas Antiar is another Javanese poison, a bitter milky juice, which acts violently on the heart. In small doses it acts as an irritant; in large ones, it causes convulsions and coma.

URETER. The tube or canal which conveys the urine into the bladder, after it has been formed in the kidney. There is one on each side, and they enter the bladder at its lower part. By their perforating the coats of that receptacle obliquely, the effect of a valve is produced, and though the bladder is full, there is no flowing back of the urine. A stone passing through this canal, if too large, gives great pain, and general uneasiness, producing what is called a fit of the gravel. *See* STONE *and* GRAVEL.

URETHRA. The membranous canal continuous to the neck of the bladder, by which the urine is evacuated from the body. It is very short in women. In men, it passes through the prostate gland which surrounds the neck of the bladder; there are openings into it from the prostate gland, and the receptacles of the seminal fluid. The passage is lined with a smooth and sensible membrane.

The urethra is liable to various diseases. It is affected with pain and scalding during the acute stage of gonorrhœa; and there is a considerable discharge of thick yellow matter from it. This, in many cases, afterwards degenerates into gleet, which is best removed by astringent injections. *See* CLAP.

Strictures in the URETHRA. These are of three kinds. 1. That which arises from an alteration of the structure of the passage. 2. That arising partly from altered structure, partly from spasm. 3. That arising from spasm. In all these cases, the stream of water becomes small, in proportion to the obstruction. As the disease advances, the urine is voided more frequently, with considerable effort, with pain, and a straining sensation after the bladder is emptied. Cold is very apt to increase the symptoms which occur when a part is strictured, and to obstruct the flow of urine altogether for a time. If the stricture be not relieved, a swelling may take place from the lodging of the water behind it; and this, by the pressure and acrimony, may give rise to inflammation and ulceration, and the formation of fistulous openings in the perineum.

Treatment. Various methods have been proposed for the cure of strictures. The one most proper to begin with is to attempt to dilate the passage by the insertion of bougies, or cylindrical waxed rolls of linen, beginning with one of a small size, and gradually coming to use one of a larger size. These bougies either dilate the stricture, or make it ulcerate. Their use must be persevered in for a considerable time. But it may happen that the urethra is contracted at different parts of the passage, in which case the cure is of course more difficult and uncertain. Another method of destroying strictures has been, to introduce a small portion of some kind of caustic, in order to act as an escharotic. Different caustics have been proposed, but none of them should be employed except under the superintendence of a skilful surgeon. In the pain of passing water which accompanies stricture, as well as some other affections of the urinary organs, the tincture of muriate of iron, given in doses of ten drops every ten minutes, till some sensible effect is produced, has seemed to act as a specific.

A stone sticking in the URETHRA is attended with very painful symptoms; inflammation, swelling, and a suppression of urine, more or less complete. If the stone does not pass, or if it is not extracted, there is ulceration of the urethra, the urine escapes into the cellular substance, and great swelling or gangrene of the parts may be the consequence. The removal of a stone from the urethra is to be attempted by relaxing the parts, and the whole body, by the use of the warm bath, or by general or topical bleeding, and by opium applied externally, or taken by the mouth. In this way, a stone may be sometimes made to pass, when aided by skilful pressure from behind. If these methods do not succeed, it is necessary to cut down upon the stone, and so remove it. The female urethra is very dilatable, and large

stones have been known to be brought through it.

URINARY CALCULI. In page 525, we have given a detail of the symptoms and treatment of stone and gravel. The examination of urinary calculi out of the body, belongs to the chemist; and as a short notice of their composition may be interesting, we extract the following from Dr. Fyfe's recent work on Chemistry :— "The calculi found in the human urinary bladder, are very various in their composition. They have occupied the attention of chemists and physicians since the earliest times; and numerous opinions have been thrown out concerning their nature; all of which, however, were vague and unsatisfactory till Scheele undertook the investigation of them. The best accounts yet published are by Wollaston and Marcet. The classification of Wollaston, though perhaps rather simple, is, with a slight addition, sufficiently minute, at least in a medical point of view. 1. *Uric acid calculi* are of a brown colour, similar to that of recently sawn fir-wood. They are in general smooth, but occasionally rough. They have a fibrous and radiated texture, are round, sometimes compressed or elongated. When heated, they give out the odour of ammonia, and of burning animal matter. They are insoluble in cold, but soluble in hot water. They are soluble in caustic alkaline solutions. The *red sand* or *gravel* passed along with urine is of the same composition, being merely the uric acid thrown down by some excess of acid generated in the system. 2. *Phosphate of lime, or bone-earth calculus.* When calculi are composed entirely of phosphate of lime, they have a smooth surface, are of a pale brown colour, and formed of laminæ slightly adhering. When exposed to the blow-pipe, they at first blacken, from the destruction of the animal matter; but soon become white, and if the heat is intense, are fused. They are soluble in diluted nitric and muriatic acid. 3. *Phosphate of magnesia and ammonia, or triple calculus.* Calculi very rarely occur composed entirely of triple phosphate. It in general surrounds those of uric acid, or it is in alternate layers with phosphate of lime. It is easily cut with a saw. It is soluble in acid, even though much diluted. 4. *Oxalate of lime, or mulberry calculus.* This is distinguished from the others, by its colour and surface being externally dark brown, internally light brown, and composed of concentric layers. It is very rough in appearance, resembling the fruit of a mulberry; and it is sawed with great difficulty. Mulberry calculi occasion the most painful symptoms; but happily they are by no means so frequent as the other kinds. 5. Calculi of *carbonate of lime* have been met with very rarely. They are generally white, and easily broken. In some cases, however, they had the appearance of mulberry calculi. 6. *Cystic oxide* calculi are composed of a peculiar substance, discovered by Wollaston. They are of a pale yellowish colour, with considerable lustre, and a certain degree of transparency. They differ from the preceding in not being composed of layers, but of a uniform compact structure throughout. They are insoluble in water and in alcohol; but easily dissolved by the mineral acids, by the alkalis, and lime-water. 7. Two other calculi have been discovered by Dr. Marcet. One was of a reddish colour, soluble in alkalis and in acids; the solution in nitric acid leaving on evaporation a bright yellow stain on the glass; and hence he has proposed to call it *xanthic oxide*, from a Greek word signifying yellow. The other was found to possess the properties of fibrine; and he has, therefore, proposed that it should be called *fibrinous calculus.*"

Though urinary calculi have been arranged into a few different classes, yet the varieties presented must be numerous, since a change of diet and other circumstances alter the deposit from urine. Thus, when there is in the system a tendency to the formation of uric acid, the calculus is composed of it; but if this be checked, the separation of the

earthy phosphates commences, and the concretion will become covered with them. When the tendency to the deposition of the phosphates ceases, uric acid may be deposited, so that the calculus may thus consist of layers of different ingredients.

URINE. The fluid secreted by the kidneys, for the purpose of being thrown out of the body. It contains a great many different salts, which have been very carefully examined by chemists. The principal of these are, urea, uric acid, salts of soda, of ammonia, lactic acid, &c. The purpose of the secretion and excretion of urine is to separate from the blood certain principles which, if retained in the body, would be hurtful; and to carry off certain portions of the aliments, which cannot be assimilated with the blood. In the urine, chemists can trace certain substances which exist in the blood, viz. water, lactic acid, and its accompanying animal matters, the fixed alkalis, and lime. They also find in the urine certain substances formed by the acidifying action of the kidneys on some parts of the blood; the sulphuric and phosphoric acids, urea, and uric acid. Sometimes, from disease, the kidneys form too much acid, as the nitric and oxalic acids; or their acidifying power is superseded, and they allow to pass unchanged, albumen, blood, sugar, or ammonia. Where acids are generated in excess, the disease is commonly of the inflammatory kind, and the urine is small in quantity, and high-coloured; but in diseases of debility and irritation, or hysteria, the urine is pale-coloured, and large in quantity. The state of the digestive functions has a remarkable effect on the character of the urine. Much valuable information will be obtained in dyspeptic cases, by a careful examination of the urine, both with respect to the seat of the disease, and the operation of remedies; indeed, in the diseased state, very slight changes in diet will produce corresponding effects on the urine. When uric acid is deposited from the urine in a crystallized state, it is generally uncombined; but when it is deposited without any regularity of form, it is frequently combined with ammonia. There is uric acid in all urine; but in the healthy state, it is kept in solution at all temperatures; but when it is in excess, it subsides as the urine cools. This precipitation shows a derangement of the digestive functions; very slight errors in diet will occasion it in delicate constitutions. Sometimes in the urine, there is so much albumen that it coagulates on the application of heat. This is the case in certain kinds of dropsy, and in them there is a tendency to inflammatory action somewhere in the system; for the counteracting of which, bleeding will be necessary; contrary to the common species of dropsy, which is generally a disease of debility. The urine is sometimes in enormous quantity, and of a sweet taste, yielding great quantities of sugar by evaporation. This state constitutes the disease called diabetes. *See* DIABETES.

URINE, BLOODY, *Hæmaturia.* Voiding of blood along with the urine may be occasioned by external violence, as blows or bruises; or may be the consequence of violent exercise, as in riding, or jumping; or it may be occasioned by the irritation of a stone in the kidney or bladder; it may also take place without any cause that we may be able to assign. In some cases, the quantity of blood lost is very large indeed, and the debility induced is of the most alarming kind. In the treatment of the disease, we are to be guided by the cause. When it is occasioned by external violence, we are to diminish inflammatory symptoms by general or topical bleedings, by giving mild purgatives, and directing the patient to drink largely of diluent liquors, to which a little nitre may be added, in order to dilute the contents of the bladder. If the symptoms lead us to believe that stone or a gravelish complaint is the cause of the disease, the primary affection must be attended to, for the treatment of which, see STONE *and* GRAVEL. The spontaneous voiding of

blood is to be checked by the application of cold to the region of the bladder, and even by injecting cold water into the rectum. Small doses of opium may be given to allay irritation; and acids are to be employed with a view to their refrigerant effect. When blood is discharged by urine, mixed with purulent matter, twenty grains of the powder of the whortleberry may be given three times a-day.

URINE, *Incontinence of*, signifies the flowing out of the urine without the patient being able to prevent it. This may arise from weakness induced by various causes, as old age, palsy, the abuse of acidulous mineral waters, hysterical and epileptic paroxysms, injuries of the head, and comatose diseases. The cure in this case is to be attempted by tonics given internally, and by cold applications to the parts. The tincture of cantharides may be given, in the dose at first of ten drops twice a-day, gradually increasing it, till some pain is felt at the neck of the bladder. A blister applied to the perineum, or to the lower part of the back, is often very serviceable.

Incontinence of urine may also arise from irritation, as that produced by a stone in the bladder, by the pressure of the child's head in the latter months of pregnancy, or from hardness and enlargement of the prostate gland. The removal of this diseased state must depend on its causes. When it arises from pregnancy, it will go off upon delivery; but when it is from stone in the bladder, nothing will do good but the extraction of the stone. In schirrus of the prostate, the cure is probably impossible. Relief may occasionally be given by mucilaginous or opiate medicines; or other narcotics, as hemlock, especially when given in clyster. When no relief can be obtained, contrivances must be made to prevent the constant discharge of urine, and to protect the neighbouring parts from being scalded.

URINE, *Retention of*. There are two different states of disease in which the urine is not passed as usual; either when it is not secreted in the kidneys; or when, although secreted in those organs, and conveyed into the bladder, it is not discharged from that cavity. It is this last affection that is denoted by *Retention of Urine*. The distinguishing symptom is a swelling at the lower part of the belly, occasioned by the distended bladder, and this accompanied by pain on pressure, fever, and deficiency of urine, either total or partial. Sometimes, the bladder may be distended although there be a partial flow of urine, and without great care the practitioner may be deceived by this circumstance. If violent efforts take place, some portions of urine may be expelled, and the patient may be supposed merely to labour under a strangury. By examination of the lower belly, and the introduction of the catheter, the disease may almost always be ascertained. Retention of the urine may arise from palsy of the bladder, which is not an unusual occurrence in advanced life. Palsy of the bladder may be owing to a person not evacuating the bladder when nature prompts him to do so. Retention of urine occurs also in bad typhus fevers. It comes on sometimes gradually, with a degree of debility which hinders the patient from completely emptying the bladder, so that he still feels a desire to do so. The inconvenience increases; at length, the patient is unable to discharge any urine, and the bladder rises above the pubes. The urine is to be drawn off by the catheter, and when this relief is given, it is not unusual for the bladder to recover its tone; pretty speedily, when the complaint has come suddenly on, and more gradually, when it has been gradual in its progress. In addition to the regular emptying of the bladder, we are to try the effect of cold applications to the parts, with the internal use of cantharides, and of blisters to the sacrum. The urine may be retained by inflammation of the neck of the bladder. Here the symptoms are acute and urgent, and demand the employment of the antiphlogistic regimen; bleeding, general and local, clysters

emollient drinks and anodynes, with the introduction of the catheter; and if the urine is not drawn off by it, we must puncture the bladder. For the method of doing this we refer to books of surgery.

URINE, *Suppression of.* This signifies, that the kidneys do not secrete the urine in the same quantities as formerly. The remedies adapted to this complaint, when it is an original one, are diuretics, as cream of tartar, the sweet spirit of nitre, squill, &c. If the suppression of urine arises from fever or other complaints; our attention is to be directed to the primary disease, as well as to that particular symptom.

URINE, *Sweet.* *See* DIABETES.

UTERUS, the womb. The organ in which the embryo is contained and nourished, till the time when it is brought forth, and is able to live, in some measure, independently of the mother. *See* WOMB, *and its Diseases.*

UVA URSI. *See* WHORTLEBERRY.

UVULA, the projection seen at the back part of the mouth, commonly called the pap of the throat. From the middle of the soft palate, the uvula hangs down into the throat, acting as a valve, by means of whose different actions we can breathe either through the mouth or the nose. It is of an irregular conical shape, and in part apparently glandular. It is sometimes awanting, sometimes double or cleft. It is liable to be inflamed and relaxed, occasioning a troublesome cough by its length, irritating the upper part of the wind-pipe; or a vomiting when it lies back on the gullet. It is sometimes swelled, apparently from a scrofulous habit. In inflammation, and relaxation, the strongest astringents are occasionally necessary; but if they fail, the uvula may be punctured; and a part or the whole may require to be removed. It is sometimes lost by syphilitic diseases.

V

VAL

VACCINATION. *See* Cow-Pox.

VAGINA. The birth, or passage to the womb.

VALERIAN. *Valeriana sylvestris.* The root of the wild valerian is celebrated as an antispasmodic and tonic remedy, and as such is used in various nervous and hysterical affections. It is given in powder to the extent of twenty or thirty grains, but it is more advisable to give it in infusion or decoction; or, as it is kept in the shops, in the form of the volatile tincture, in which the valerian is combined with ammonia. The odour of valerian is particularly attractive to cats.

VALVES. Certain doublings of the lining of vessels and cavities, intended to act so as to prevent the passage of a fluid one way, while it is free in the opposite

VEG

direction. They are chiefly found in the course of the veins of the extremities, where the free course of the blood would be impeded by the various motions of the body; and at the commencement of the great arteries of the lungs and of the system, where it is necessary to prevent the blood from regurgitating back to the heart.

VAPOUR BATH. *See* BATH.

VEAL, like the flesh of other young animals, abounds in gelatinous matter; it is more stringy, and less easy of digestion than beef. It is, however, a very excellent and useful article of food.

VEGETABLE DIET. The effects of vegetable diet, as compared with animal food, are, that it requires a greater bulk and quantity to supply an equal proportion of nourishment, that it takes a

longer period and more complex process for its digestion, but that it is less stimulant to the stomach and less heating to the system. These properties render a large proportion of vegetable food useful in certain constitutions and habits of body; well adapted for warm seasons and climates; and proper for individuals who either naturally, or from their modes of life, are liable to inflammation and other diseases of excitement.

In tropical climates, the great majority of the inhabitants live principally on vegetable food; and some nations and sects are forbidden by their religion the use of any other. Such nations require to use a good deal of spices and other condiments; and, accordingly, these articles are native in warm climates. Those who use vegetable food exclusively, are feeble and relaxed; incapable of long bearing fatigue, or of continued active exertion. In northern climates, animal food is more abundantly used; as the inhabitants require a greater proportion of stimulating as well as digestible aliment. If proper exercise be not taken by those who use a full diet of animal food, it will nourish so much, that they will become oppressed, corpulent and diseased; but much of this bad tendency will be corrected by a due mixture of acescent vegetables, as potatoes, greens, carrots, turnips, &c. It has been remarked, that putrid diseases and scurvy have not raged nearly so much in large towns, and especially in London, since vegetables were more copiously used in diet; and so much had the consumption of them increased, that Mr. Miller, the celebrated gardener at Chelsea, informed Sir John Pringle in 1760, that a cabbage, which then sold for a halfpenny, cost threepence at the beginning of the century; and that those who now used vegetables every day, at the former period, used them only once a-week, by way of dainty. From which circumstance, and the great extent of ground laid out in kitchen-gardens, he inferred, that there was at least six times more garden-stuff used at the time he spoke, than about the time of the Revolution. In our climate, a due mixture of animal and vegetable food is necessary, to impart nourishment and vigour to the system; although it is found, that the almost exclusive use of vegetable aliment is productive of far less evil than what follows if animal food be too much indulged in.

There are some diseases in which the use of vegetables is improper. In those afflicted with stomach complaints, they are almost certain to occasion flatulence distension, and spasms of the bowels. Their use in dyspeptic cases must therefore be almost interdicted; at least till proper remedies have brought the stomach to some degree of vigour. In the disease called diabetes, accompanied with an immoderate flow of sweet urine, one plan of cure has been, a total abstinence from vegetables of every description. There are other diseases again, in which vegetables alone are permitted; such are all febrile and inflammatory complaints; consumptions, when there is much fever present; fulness of the system, threatening apoplexy or palsy; or when after one attack has been suffered, we wish to prevent another.

VEINS are those vessels which bring back to the heart the blood which has circulated in the arteries. The blood which is in the veins is of a dark purple colour, and is no longer fit for the purposes of the animal economy. When it reaches the right side of the heart, it is sent through the lungs, where, by the action of the respired air, it again puts on its bright florid red colour; and is again fitted to circulate through the system.

It is by opening one or more veins, that blood-letting is commonly performed; and the veins which are most convenient for that purpose, are those which are situated near the bend of the arm. By tying a ligature pretty tightly round the arm, the circulation in the superficial veins is checked, and they swell and come into view. Having made choice of the vein we intend to cut, and ascertained

that we are not too near an artery, we proceed as directed under the article BLOOD-LETTING.

VEINS, *Inflammation of.* Sometimes, when a vein has been opened for the purpose of blood-letting, or has been wounded with a lancet during the opening of an abscess, inflammation extends along its course towards the heart, and proves fatal. It is difficult to say what peculiarity of constitution, or what other cause gives rise to this very lamentable event. Some have thought that poisonous matter must have been introduced; but it has followed the use of the very cleanest lancets; and among the countless subjects of venesection, it is comparatively a rare occurrence. Our only resource is to diminish inflammatory action by the usual remedies, abstracting blood, giving purgatives and antimonials; but often there occurs such debility, that we are obliged to go on a totally opposite plan, giving wine and strong stimulants, which in their turn have to be withdrawn; while we are forced, in our struggle with a hopeless disease, to combat the symptoms which for the time appear most formidable.

VEINS *Knotted, or Varicose.* In different parts, especially of the lower extremities, there are sometimes seen a number of unequal knotty swellings, of a deep blue colour, occasioned by portions of the veins being dilated. The cause of these swellings is the obstruction to the free passage of the blood through the veins; hence tumours in the groin may cause varicose veins of the legs; and the appearance of such veins is frequent in pregnant women, from the enlarged uterus and its contents pressing on the large trunks of the veins. Sometimes the complaint arises from general debility, and from a sedentary life. When the distension is great, there is considerable pain; and the veins may be eroded, and cause a great discharge of blood, or troublesome and obstinate ulcers may be produced. The pain and inconvenience of varicose veins are not great at first, and hence they are too often neglected till they become very difficult of cure.

Treatment. The varicose veins of pregnant women go off when they are delivered, and require very little treatment, except attention to posture. In other cases, a moderate pressure by bandages, and diminishing the force of the circulation by small bleedings, is requisite. A laced stocking makes a good and equal pressure. It has been proposed to cut varicose veins across, by introducing a bistoury behind them; and in some instances this plan has succeeded; but the instances of failure, and of death in consequence of the operation, have been so numerous, that Sir Astley Cooper says it must be considered as wilful murder to attempt it.

VENEREAL DISEASE. *See* SYPHILIS.

VENISON. The flesh of the deer is reckoned a great delicacy; it is savoury and easy of digestion; and the animal being commonly heated by the chase before being killed, the flesh is on that account the more tender. It is commonly eaten with jelly, or other sweet sauce.

VENTRICLE. Various little cavities in the body have the name of ventricles. The most remarkable are those in the brain, which in the state of health are scarcely to be considered as cavities, but rather as surfaces in contact; but in disease they become distended with fluid, and are the seat of that formidable malady called water in the head. *See* HEAD, *Water in.*

VERDIGRIS is the subacetate of copper, and is prepared by corroding plates of that metal, by means of the husks and stalks of the grape, which have been made to ferment after the juice has been expressed from them. It is seldom or never used internally, as it is an active poison; and it is this which renders it so dangerous to employ copper vessels in cookery where vinegar is to be used. It is applied externally to indolent sores, made up into an ointment. Mr. Brande thinks the verdigris unnecessary in phar-

macy; and Dr. Paris says, that powdered verdigris is the active ingredient in the quack medicine called Smellome's Eye salve.

VERTEBRÆ. The bones which compose the column containing the spinal marrow. *See* SPINE.

VERTIGO. *See* GIDDINESS.

VESICATIONS. Little bladders, or blisters, raised on the skin by irritating substances applied to it.

VESICATORIES. Substances which have the power of raising blisters on the skin, as cantharides, mustard, &c.

VESICLE. A small round elevation of the outer skin, containing lymph, which is sometimes clear and colourless, but often opaque, and whitish, or pearl-coloured. It is succeeded either by scurf, or by a laminated scab. A *pustule*, which much resembles a vesicle, differs from it in containing pus; we speak of the *vesicles* of cow-pox, and the pustules of small-pox.

VINEGAR. The product of liquors which have undergone two processes of fermentation. Vinegar is a grateful acid, much used as a condiment with food. In small quantities, it is a grateful and wholesome stimulant; it checks the fermentation of certain substances in the stomach, and prevents raw vegetables from inducing flatulence; it seems also to render fatty and gelatinous substances more easily digestible; but bad effects follow from too great a quantity of it.

Vinegar is well known as a preventer of putrefaction in animal and vegetable matters. Hence its use in pickling. Vinegar is a useful addition to the drink of patients in inflammatory fevers. Its odour is applied to the nostrils in fainting and hysterical complaints; and it is very useful as a fomentation in headach, and in various swellings. Its vapour is beneficially applied to the throat by being inhaled; and the same vapour diffused through the chambers of the sick, though it may not destroy contagion, gives a pleasant fragrance, which renders the air less offensive to the necessary attendants. Vinegar is very useful also when applied externally as a refrigerant. Many practitioners apply it to burns and scalds when the skin is not broken. For this purpose, it is used diluted with two parts of water.

VIPER, BITE OF. The symptoms which arise from the bite of a viper are the following; acute pain in the wounded part, with a considerable degree of swelling, at first red, but afterwards livid, and diffused over the neighbouring parts. Shortly after, the constitutional symptoms appear, the person becomes faint, the pulse is small and intermitting, sickness and vomiting come on, the skin becomes yellowish, and death not unfrequently succeeds.

Treatment. We must rub the wound with olive-oil, and endeavour if possible to prevent the poison from getting into the system, by putting a ligature round the part bitten, when it can be done; and by cutting out a portion of the neighbouring substance, and by promoting a discharge by the use of irritating applications, as caustic, acids, and ammonia. We are to give medicines that will produce a sweat; and if great sinking of the strength comes on, ammonia, brandy, and other stimulants are to be liberally administered.

VITRIOL. The name of several metallic salts. The sulphuric acid with oxide of iron forms green vitriol; with oxide of copper, blue; and with oxide of zinc, white vitriol. The sulphuric acid having formerly been obtained by distillation from green vitriol, is called *Oil of Vitriol*. *See* SULPHURIC ACID *and* SULPHATES.

VITUS. For the spasmodic disease called Saint Vitus's Dance, *See* DANCE.

VOICE. The voice of man and other animals depends on the form and structure of the larynx or upper part of the wind-pipe, and on the opening into it, called the *glottis*. Articulation, which is peculiar to man, is produced by the muscles of respiration, the tongue, the teeth, the palate, and the lips. The glottis has

been proved to posses the properties both of a wind and of a stringed instrument, as its opening or chink can be enlarged or contracted; and the ligaments attached to it can be more or less stretched. But the voice can be so varied and complicated in its tones, that no physiologist is able sufficiently to explain it.

The following specimen of inquiry on this subject is given in the printed Lectures of Mr. Abernethy:—

"It is questioned how the tone of the voice is produced by the muscles of the throat that I have described; for that it is produced by those muscles, is manifest by the division of the recurrent nerve that supplies them. I said, in speaking of that nerve, that experiments had been made on that most noisy of all animals when under torture, namely, a pig; that when that nerve was divided, no sound was induced. Then, I say, how is this done? Does the tone depend upon the enlargement or diminution of the aperture, or does it depend upon the tension of the strings? Now, for my own part, I am not competent to say; and when I cannot make up my own mind on any subject, I always form my opinion from the opinions of those who are sound-headed, and inclined to labour; and I find that Haller affirms that it entirely depends upon the tension of the strings, and not in the enlargement or diminution of the aperture. You know, on wind instruments, you blow an octave higher with the same aperture, only by shortening the tube; and this also takes place in the larynx, as I shall afterwards mention; but this relates to the note, and not to the tone of the voice. As to the tone, there is no tone if the muscles do not act; and the muscles seem to produce tone by tightening the strings. A two-stringed instrument—how can this produce tone? Now here, you know, you must attend to the construction of musical instruments in general. The strings are not the cause of the tone; the tone arises from the vibration of the wood by which those strings are surrounded. In the harpsicord, do the strings give the sound, or the vibration of the wood? Every one knows that it is the vibration of the wood. So it is also with the fiddle. It is the wood, then, that gives the vibration, and this communicates with the air, as the material which communicates sound to us. It is in this way, too, that the tone of the voice is produced; and it is very curious that such results should take place from such simple mechanism; but you are already apprised of how these results do take place. Then, again, the current of tone is split and subdivided, and so are particular sounds. With regard to this splitting and subdivision of the current of sound, necessary for articulation of words and communications of feelings, I would have you study that, to a certain extent, at any rate. It is a very curious thing, that from this study there has resulted an effect, which is the greatest that we can imagine to have been produced by human labour and observation, that of teaching the deaf to speak—teaching a man who never heard a sound to communicate his sentiments to another, and be capable of understanding, merely by the observation of the lips. Now, then, the outlines of the study are formed in the following manner: All *vowels* seem to be but notes of the voice; they are all done in the larynx. Then *consonants* are divided into *labial, lingual, dental,* and so on. The labial consonants called *b, p,* and *m,* are produced simply by the closing of the lips; and this being a motion which a child might perform without volition, the first thing a child pronounces is *ba, ba, papa, papa.* Lingual, *d, t, l,* and so on, *ta, ta, la, la; g* is a lingual, it is done by the back part of the mouth, and is certainly the very first sound a child utters, *ga, ga, ga; s* and *z* are dental, or compound, and are pronounced by a sort of hissing through the teeth."

The voice is injured by various diseases. A catarrh or common cold produces inflammation of the larynx; and the voice is altered both by the elasticity

of the ligaments being diminished, and by the quantity of mucus secreted, preventing their vibrations. In fevers, and diseases of debility, the voice is affected from the weakness of the muscles subservient to it. In hysterical complaints, the voice is sometimes lost; it is occasionally recovered for a few minutes or a few hours, without any evident cause, and then lost again. In palsy, the voice is weakened, and the power of articulation lost. The passion of fear has the same effect. The treatment of this unpleasant defect must vary with the cause producing it. Inflammation is to be subdued by the proper means; and palsy and other nervous affections are to be treated with repeated blisterings.

When the delicate structure of the parts concerned in the formation of the voice is considered, it will not appear surprising that various organic changes should take place, and cause an almost constant, or even a permanent loss of voice; and from the great exertions of public speakers and singers, they are often the subjects of disease in those parts. Persons who speak in public require to have something to moisten the mouth; a little sal prunella will answer the purpose.

VOMITING is the expulsion of the contents of the stomach by the mouth. It is a symptom of a great variety of diseases; and to relieve the vomiting, we must, if we can, remove the disease itself. In several stomach complaints, it is the most distressing symptom, and requires to be checked by opium, or by effervescing draughts, or, in very obstinate cases, by a blister on the pit of the stomach.

Vomiting is resorted to as a remedy in a variety of diseases. At the commencement of several fevers and eruptive diseases, vomiting occurs; and by a salutary effort, nature relieves herself of undigested aliment, which the body could not retain without the certainty of suffering much by it; and this process is imitated by the intelligent physician. In dropsy, when the patient is not much weakened, the exertion of vomiting stimulates the lymphatics into action, and tends to carry off the water. Vomiting is of great service in various disorders of the wind-pipe and lungs, and is an excellent promoter of expectoration. In the croup, we should almost invariably begin our treatment by the exhibition of an emetic; and if we use the tartrate of antimony, we may at once obtain the good effects of an emetic, and diminish inflammatory action. In catarrh and hooping-cough, an emetic is of the greatest service; and when vomiting is not produced by the usual emetics, we justly regard this resistance as an indication of a dangerous state of disease.

VOMITING *in* INFANTS. This occurs very frequently, as their stomachs easily reject any load or indigestible substance. When it does not continue long, or go to excess, it does them very little harm, and they continue to thrive well; but otherwise, it is to be checked by suitable means. An emetic is to be given, to get rid of any indigestible substance in the stomach. If the vomiting is owing to irritation kept up after the cause has been removed, gentle stimulants, as a little tincture of rhubarb or of cinnamon, or even of opium, may be taken inwardly; or a small mustard poultice, or volatile liniment, or a blister put on the pit of the stomach. Infants should not be allowed to overload their stomachs by sucking too much, or by large quantities of spoon-meat.

Vomiting may follow the suppression of a discharge from behind the ears; in which case, the discharge must be brought back, by blistering ointment. Vomiting is a very common symptom at the commencement of eruptive diseases, as small-pox and measles, and it generally ceases when the eruption comes out. Other eruptions, when suddenly repelled, very often occasion vomiting. Warm bathing and mild laxatives are the best remedies in such cases. The foregoing instances of vomiting are in general easily managed,

and productive of no danger; but if vomiting occurs in weakly children, from too great irritability of the stomach, it is accompanied with great danger. Tonics and bitters are then to be directed, and spirituous fomentations are to be applied externally.

Vomiting of Blood *or Hæmatemesis.* A disorder of a very alarming appearance, but of less dangerous tendency than some others of a more insidious nature. Much of the hazard of the disease will depend on the rapidity with which the blood is lost. Suppose one or more blood-vessels on the inner surface of the stomach to burst, and discharge blood into that organ. It will accumulate, will become black and clotted, and when it reaches a certain extent will excite vomiting, and be thrown up in a large quantity, mixed with food and other contents of the stomach, probably filling several basons; and exciting the greatest apprehension by its enormous quantity, and disgusting appearance. The patient, however, is by this discharge relieved of a sense of fulness and oppression, till after a day or half a day more, the same thing recurs. The pulse is not raised, nor are any feverish symptoms present. On the other hand, there may be a frequent discharge of clear unmixed florid blood, accompanied with a degree of fever, and great faintishness at times, from the loss of blood. This is an instance of what is called active hæmorrhage, is more dangerous, and requires more prompt and decided assistance. A bleeding from the stomach is distinguished from a bleeding from the lungs, by this last being frothy from the admixture of air, and being of a more bright red colour.

Treatment. In the acute and febrile state of the disease, bleeding from the arm must be resorted to, in order to lessen the inflammatory action of the vessels in general; and those of the stomach will pour out less blood, or the discharge will stop altogether. Other parts of the antiphlogistic plan are to be enforced, as purgatives and cooling drinks: a little sulphuric acid properly diluted will both tend to cool the system, and being directly applied to the bleeding vessels, will tend to constrict their mouths.

Vomiting of blood is thought in some females, to supply the place of the monthly discharge; but, there is a species of the disease incident to females who are regular, and which is thought by Dr. Hamilton, senior, to depend on a slow state of the bowels. In this kind of vomiting of blood, purgative medicines have been found the most effectual remedy; and are to be followed up by tonics, if the strength seems impaired.

"This vomiting of blood, which we have seen as the result of ulceration, also occurs without any such disease; and I have seen it fatal where no organic disease could be discovered, and even the source of the hæmorrhage could not be detected. In other cases, a varicose state of the veins is observed in the mucous membrane of the stomach. The quantity of blood brought up is often immense, so that the patient is reduced to the last degree of exhaustion; and yet the disease is not often fatal. Some persons, especially women, are liable to frequent or almost periodical attacks of it, sometimes in connexion with retention of the menses. When the patient is much exhausted, it is necessary to give small quantities of brandy at short intervals. For settling the stomach, and restraining the hæmorrhage, the acetate of lead is often very useful, and may be given in doses of one or two grains, repeated every three or four hours, for thirty-six or forty-eight hours, if necessary; also the acids, the muriated tincture of iron, bismuth, alum, and kino in powder or tincture. The blood is apt to pass into the bowels, from which it must be discharged by the mildest means, as injections repeated two or three times a-day. The patient must be supported by farinaceous nourishment in small quantities, or by milk, or fresh-made soft curd." (Dr. Abercrombie *on the Stomach, &c.)*

VULNERARY BALSAM is a popular name for the compound tincture of

benzoin, called also Wade's Balsam, and the General's Balsam; a favourite application to a recent cut. The stimulant nature of this balsam renders it rather improper for the purpose to which it is applied; and the great benefit is, that it persuades people to tie up the cut, and keep its edges together for a number of days without disturbing it; which allows it to heal, as surgeons say, by the first intention; without the formation or discharge of matter

W

WAS

WARM BATH. *See* BATH, *page* 60.

WARTS are excrescences from the skin, having their surface pointed or granulated, sometimes being very painful when rubbed, and liable to bleed when touched. Young people are sometimes much infested with them, and as they appear in great numbers about the hands, they are very anxious to get rid of them. Sometimes they go off of themselves, and leave the skin quite clean; but it is generally necessary to adopt some means for their speedier removal. This is not very difficult; some stimulant application, as savine ointment, or blue vitriol, or lunar caustic, or potash, will answer the purpose; and it is proper first to pare off the tops of them to let the stimulant reach the sensible surface. When they are removed by the knife, it is necessary to apply caustic to destroy their roots completely. When warts have a narrow neck, a silk thread or horse-hair may be tied round it, and they will drop off in a few days. Warts are often a sequel of venereal complaints. They are to be cured by the remedies suited to the original disease; and they may be rubbed with red precipitate ointment, or some other stimulant application.

WASP, STING OF. These insects seldom sting unless irritated; but when they do, the injury they inflict is accompanied with a sharp pain, followed by inflammatory swelling in the neighbourhood, which occasionally extends over the

WAT

whole limb. It generally ceases of itself, but may be relieved by the application of hartshorn, or spirits of wine, or other cooling lotion. If a person has been stung by a great many wasps, as sometimes happens when they are irritated by the destruction of their nest, a considerable degree of fever may be excited, and this will require some cooling medicine, and the application of oil to the inflamed parts of the body.

WASTING, OF CHILDREN. *See* MARASMUS, *and* ATROPHY.

WATCHFULNESS IN INFANTS. Sometimes infants do not take what appears a due proportion of sleep. This may arise from various causes. If it is owing to any disease, as teething or disordered bowels, costiveness, worms, or fever, or a tendency to a complaint in the head, we must not fly to opium or narcotics to induce sleep, but must direct our attention to the primary disease. If it is chiefly in the night that the child is wakeful, something may be done by increasing its exercise, and abridging its sleep in the daytime.

WATER is interesting in a dietetic point of view, as the natural drink of man and other animals. It quenches thirst; and, when moderately taken, assists digestion; it corrects the acrimony of our fluids, and assists the secretions and excretions, especially those by the skin and kidneys. But there is no propriety in restricting man exclusively to

this drink, as his tastes and habits are modified by civilized life, and as he is found to live and thrive, even when using a great variety of liquids. Of all of them, however, water is the basis and the largest portion.

The qualities of water differ considerably according to the source whence it has been derived, and the matters which it holds dissolved or suspended in it. Water may be very safely used, although it has not the perfect purity obtained by distillation; but water impregnated with dissolved minerals, or contaminated with putrescent animal or vegetable substances, should be generally abstained from.

The different kinds of water, as depending on its various sources, are rain-water, spring-water, river-water, well-water, snow-water, lake and marsh-water. 1. *Rain-water* is the purest of all; but when collected by dropping from houses, near or in large towns, it is contaminated by the smoky atmosphere through which it falls, and may contain calcareous matter; on which account it should be boiled and strained before drinking. 2. *Spring-water* often contains some saline matter, and sometimes is what is called *hard*. This means that it contains certain salts which unfit it for dissolving soap, and prevent it from acting on vegetable matters. Hence hard-water will not do for washing clothes, and is well known to be unfit for making good tea. The salt which imparts those bad qualities to water is generally sulphate of lime, (gypsum, or plaster of Paris). Five grains to a pint of water will make it hard. Weak stomachs feel this hard water to be oppressive; and some of the inferior animals, as horses, dislike it much, and have their bowels injured by it. 3. *River-water* is generally pretty pure, but it may be muddy from foreign bodies suspended in it, from which it will be freed by mere rest and filtration. Dr. Paris says that there exists a popular belief that the water of the Thames is peculiarly adapted for the brewing of porter; but he says such water is never used in the London breweries. 4. *Well-water* is nearly the same as spring-water. 5. *Snow-water* has got a bad name, as producing the swelling of the neck called goître or bronchocele, so common in the Alpine regions. The same disease, however, occurs at Sumatra, where there is neither snow nor ice. The water obtained from melting the ice of the sea in high latitudes was found to be quite sweet, soft, and salutary. As air is expelled from water during the act of freezing, the water obtained from melting snow or ice is somewhat insipid from the absence of air, but it quickly recovers it by exposure to the atmosphere.

Various methods have been proposed for the preservation and purifying of water. Mechanical impurities may be got rid of, by filtering it through sand or porous stone. Hardness of water may be removed by adding to each pint from ten to fifteen grains of an alkaline carbonate twenty-four hours before it is used. Charcoal has a wonderful power of correcting putrescency, and therefore water will be purified by passing it through alternate layers of sand and charcoal. When any water is suspected, it is a good plan to boil it, before it its being used. To preserve water sweet in long sea-voyages, was formerly a great desideratum. When long kept in casks, it is partially decomposed; and carburetted hydrogen being evolved, imparts its peculiar smell and taste to the water. This decomposition may be prevented by charring the inside of the casks; and in the navy, with the view of preventing it, iron tanks are substituted for wooden vessels. The Thames water is very apt to become black and exceedingly offensive during a long voyage, as it contains mud and vegetable and animal remains, which occasion it to undergo a violent change when kept; but on drawing it off in earthen vessels and exposing it to the air, a quantity of black slimy matter is deposited, and the water becomes clear and sweet.

WATER IN THE CHEST. *See* CHEST.

WATER IN THE HEAD. *See* HEAD.

WATER-BRASH signifies the discharge of a thin watery fluid from the stomach, with belchings, and a sense of heat at the region of the stomach. It is not unfrequently one of the symptoms attending indigestion or stomach complaints, but it sometimes occurs as an original disease. It comes on in paroxysms, usually when the stomach is empty. The patient perceives a pain at the pit of the stomach, with a sense of tightness, and this is increased by the erect posture. When the pain has continued for some time, it is succeeded by belchings, and the discharge of a thin watery fluid, sometimes acid, but generally tasteless. The belchings are repeated for a time, and then the fit goes off. When the disease has once happened, it is apt to recur frequently for a long time afterwards. It is most incident to persons of middle age; and to females, sometimes during pregnancy, sometimes when they are afflicted with the whites. It is not always connected with any particular diet; but is excited often by cold applied to the feet, and by emotions of the mind.

This disease is difficult both of explanation and of cure. The paroxysms are to be treated with opium and other antispasmodics, as musk, ether, and ammonia. To prevent the return of the fits, we give bark and sulphuric acid, and occasional purgatives. Magnesia, lime water, nitric acid, and the alkalis may be given. The oxide of bismuth, in the dose of five grains three times a-day, has been recommended. Blistering and mild farinaceous food are of service.

WATERY GRIPES, IN INFANTS. "A discharge of dark-coloured liquid stools like moss-water, which very rapidly occasion emaciation and prostration of strength, and require very serious attention. This variety of looseness often attends teething, and is also not unfrequently occasioned by the depraved quality of the nurse's milk, or by some error in the ordinary management of the infant. The means of cure must be varied according to the causes; but in general an ipecacuan vomit, one or more doses of some mild laxative, with an opiate clyster at bedtime for three or four times, attention to the state of the teeth, warm clothing, a change of milk if the infant be still on the breast, and if otherwise, a due regulation of the diet, are the chief means which are found useful." (PROFESSOR HAMILTON.)

WAX is the honeycomb of the bee melted with boiling water, pressed through cloth bags, and cast into round cakes. It is supposed to be a product of the bee, and not merely collected by it from the flowers. Its smell is like that of honey. It is chiefly used in the composition of cerates and plasters. It can be rendered white by bleaching.

WEANING. The change of an infant's diet from his mother's or nurse's milk to solid and liquid food, is a circumstance of great importance with respect to his future health. The period of weaning will depend on the consideration of various particulars, as the state of the child's health, and of that of the nurse; the condition of the infant with respect to teething, the season of the year, the prevalence of epidemic diseases, &c. When both mother and child are in good health, there is no advantage gained by suckling the child above nine or ten months. If she is in delicate health, or is suffering from the effects of nursing, as ophthalmia, hectic fever, or debility, the child may be weaned before that age. The winter is an inconvenient time for weaning, as the infant cannot be amused in the open air through the day, and is likely to be fretful during the long nights. If the child is teething, and feverish, and uneasy in consequence, it is not proper to wean him, or to add the loss of his accustomed gratification to the other sources of his annoyance. If the child is of a feeble constitution, or if the parents are scrofulous or otherwise unhealthy, the child should be nursed for sixteen or eighteen months, and that not by its mother, but by another woman of a healthy and sound constitution.

The great point to be attended to in

weaning is, that it be not done abruptly, and that the child be duly prepared for being deprived of his milk, by having his stomach, for a considerable time before, accustomed to different kinds of food. For some weeks previous to weaning, he should receive spoon-meat in great quantity, and the milk allowed should be gradually diminished. No harsh or disgusting methods should be used to make the child loathe the breast. If he be in good health, and be taken out to the open air, and amused, if his diet and his bowels be attended to, he will soon be independent of the milk; of which we suppose, he has for some time been daily more and more deprived. If the weaning be ill managed, if it be too abrupt, and if the food we give do not agree with the infant, he may be seized with weaning-brash, a dangerous affection, which shall be the subject of our next article.

When an infant is weaned, it is improper and unnecessary to give medicines, unless some urgent symptoms demand attention. The bowels should not be teazed with laxative drugs, nor should opiates ever be given merely to stupify the child, and keep him quiet during the night. As Dr. Hamilton recommends, when restlessness occurs, the infant ought to be taken out of bed, and carried about through an airy room. The child should early be accustomed to regularity in the periods of his taking meat and drink; and of those, very little should be given during the night. Spirits and water for children, should always be avoided.

" After weaning, the food of infants should consist of weak beef-tea, panado, light pudding, and the various preparations of milk. Rusk biscuit ought generally to be used instead of ordinary bread. The common preparation of oatmeal (called pottage or porridge,) till within these few years, much used in this part of Great Britain, is in general too difficult of digestion for infants, unless a proportion of barley-meal be mixed with the oatmeal. Frequent exposure to the open air when the weather is favourable, and an increased degree of exercise, are highly beneficial to newly weaned infants." (Professor Hamilton.)

WEANING-BRASH. The assemblage and succession of symptoms known by this name, appears in children after weaning; generally when this is attempted too soon, or too abruptly, or when the child is brought up by the hand. It begins with frequent griping and purging, in which the stools are of a green colour, and often attended with vomiting of bilious matter. Wasting of the body succeeds, and the child is carried off by convulsions. These symptoms seem to be owing to the sudden change of diet.

Treatment. An attention to the diet is the chief thing to be trusted to for the removal of the disease; and, if possible, the child should be again put to the breast; in some cases it may be advisable to give even younger milk than the mother's or nurse's, which it has lately left off. When good milk cannot conveniently be obtained, a little animal food, in the form of broth or jelly, is to be given, and a little wine or wine-whey. All vegetables, and butter, and much sugar are to be prohibited. The clothing is a matter of very great importance. Flannel is to be worn next the skin, and all irregular application of cold is to be avoided. When the child is able to bear it, exercise in good air, and frequent washings of the body with tepid water, are good auxiliaries. With respect to the medicines proper in the weaning-brash, the best are those of a laxative kind, as rhubarb, alone, or with a grain or two of calomel; to which last, ipecacuan, in the proportion of three grains to one of calomel, forms a good addition. Magnesia is useful to correct acidity.

WEED, *Ephemera.* A feverish attack which runs through all its stages in twenty-four or thirty-six hours. A weed very frequently occurs in the child-bed state. It begins with cold and shivering, headach, pain in the back, and sickness. This stage continues for a short time, and is then succeeded by great heat, which is

followed by profuse sweating, with which the illness is finished, but considerable weakness is left behind. The causes of weeds are exposure to cold, irregularities in diet, sudden emotions of the mind, and various instances of imprudence or mismanagement in the puerperal state. These transient febrile attacks are rarely or never fatal; but they are inconvenient, and may lead to some other worse disease. Many women understand by weed, the shivering which introduces a great variety of febrile diseases; and think they have only got a weed, when in reality inflammation of the bowels, of the lungs, or of the breasts, has begun. Shivering fits therefore should never be neglected. If there be shiverings followed by a fixed pain in a particular spot, with heat, thirst, and a full and strong pulse; there is in all probability inflammation of some organ going on.

Treatment. In the cold fit, we are to give mild warm diluents, as barley-water, gruel, or white wine whey very weak. Violent methods must not be used to put an end to the cold fit; no cordial drinks with wine or spirits, no overloading with bed-clothes. Warmth is to be applied to the feet or to the pit of the stomach by warm flannels or bottles filled with hot water. When the hot stage has commenced, the diluent drinks may be continued, but no means used to keep up the heat; the air of the room should be free, and the bed-clothes light; and a draught made of ten grains of the carbonate of potass, and lemon-juice, or the salt of lemons, may be given; or a julep made with nitre; a drachm to a pint of gruel. When these means have relieved the burning heat and thirst, and brought out a gentle perspiration, the uneasy feelings go off; but care must be taken not to check the perspiration too suddenly, lest a second attack be brought on. If the sweat be suffered to be profuse, or long continued, there may be miliary fever, or great weakness. Warm diluent drinks are to be given, and the sweating is to be kept up for six or eight hours, after which the drinks are to be gradually discontinued. The patient is to have the bed-clothes and the linens shifted, taking care to have the dry clothes properly aired. From the weakness generally felt, it is necessary to give a little wine before the patient is shifted. Bark and wine, and nourishing diet, avoiding stimulation and excess, are to be used to prevent the return of weeds.

WEEPING EYE, *Epiphora* or *Fistula Lacrymalis.* An involuntary and constant flow of tears over the cheek. At the upper part of the orbit of the eye is situated the lacrymal gland, which secretes the tears. In the healthy state, these are diffused over the surface of the eye-ball by the motion of the lids. The quantity above what is necessary for keeping the eye clean and moist, is taken up at two little points, which may be seen in the living subject, one on each lid, near the inner corner of the eye. These points are the commencement of a little sack and canal, through which the superfluous tears are carried into the nose, where they moisten the lining membrane, or are evaporated by the air we breathe. A disease, or obstruction in any part of this canal hinders the passage of the tears into the nose; and they, therefore, accumulate on the lids or fall over upon the cheek.

Mr. Pott, who wrote with great accuracy on the Fistula Lacrymalis, divides the disease into four stages. 1. A simple dilatation of the sack, and obstruction of the passage to the nose, which, upon pressure, discharges a mucus, either quite clean, or a little cloudy; the skin covering the bag being entire, and perfectly free from inflammation. 2. In the second stage, the tumour is somewhat larger, the skin is inflamed, but entire; and the discharge is of a pale yellow, or purulent colour. 3. In the third stage, the skin covering the sack has become sloughy, and burst, by which the swelling is lessened; but the mucus which used to discharge itself through the lacrymal points, now comes through the new opening; the passage to the

nose is yet not otherwise diseased, than by the thickening of its lining. 4. The passage is totally obliterated, its inside being either ulcerated or filled up with a fungus, and attended sometimes with a caries of the bone underneath.

Treatment. In the first stage, we attempt to remove the obstruction of the passage by introducing a probe, or by injecting a fluid through a very fine syringe, into the inferior lacrymal points. Warm water is best at first; and if this does not succeed, a solution of sulphate of zinc or wine of opium may be tried. The healthy state of the neighbouring parts is to be attended to, and to be restored by leeches, and the ointments recommended in diseases of the eye or eyelids. In the second and third stages, when the parts are inflamed and swelled, a proper opening should be made with a lancet; or if the skin has broke, the opening, if necessary, should be dilated. A silver probe is to be pushed into the nasal duct, with force sufficient to overcome the obstruction; and afterwards a silver style, a little smaller than the probe, having a head like a nail, but placed obliquely, is to be left in the passage. It is to be removed for cleaning, once every day for about a week, and afterwards every second or third day. A little warm water should be injected each time into the nose. In many cases, the watering of the eye ceases as soon as the style is introduced. Some wear this style for years, others leave it off in a month or six weeks, and the parts continue well. In the worst cases of the disease, or the fourth stage, an opening must be made through the bones of the nose; and by wearing a style, as above, an artificial passage will be formed.

WEN is the common popular name for any excrescence or tumour, growing on any part of the body, most frequently applied to tumours about the throat and neck. Tumours are distinguished by surgeons, according to the nature of their contents; and they require treatment varied according to circumstances. Sometimes wens are attached by a narrow neck, and may be removed by the knife, or by ligature; at other times they have a broad base, and are so supplied with large blood-vessels, that they cannot be removed at all, or cut without the utmost risk. Sometimes tumours are filled with a curdy or cheese-looking matter, and are contained in a cyst, or bag, which may be dissected out along with its contents, and the cut skin will heal, and leave very little deformity; in other cases, the tumour is *fungus hæmatodes*, or bloody cancer, which pretty certainly destroys the patient. The bronchocele, or goître, is to be treated with iodine ointment, and the tincture of iodine internally; the vessels that go into it are so large and numerous, that an operation can rarely be performed there. Sometimes very large wens contain a mixed substance resembling fat marrow; they have a firm fleshy feel, and sometimes attain an enormous size. Sir Astley Cooper removed from the abdomen of a man, a fatty swelling, which weighed, independently of the blood in it, thirty-seven pounds, ten ounces. *See* SWELLINGS, BRONCHOCELE, &c.

WHEAT. "The *Triticum Hybernum* (and other species) of botanists, has been cultivated from time immemorial in Europe, and the northern parts of Africa, and the seeds of it employed as one of the most important articles of food. Indeed wheat-flour is the only substance known, from which good loaf-bread can be made. The seeds, when ripe, are ground to a fine powder, and by passing this powder through cloth sieves of various degrees of fineness, it is separated into distinct portions. The fine flour constitutes the greatest portion; and the bran, which consists of the outer coat of the seed, and which is the coarsest of all, constitutes the next greatest portion." (THOMSON'S *Chemistry.*) *See* BREAD.

WHEY. When milk is curdled by the addition of rennet, or any other coagulating substance, the thin part is of a yellowish green colour, and has a pleasant sweetish taste, in which the flavour of milk may

be distinguished. It generally contains a little oil, and always some curd. Whey is less nutritious than milk; but it affords an excellent mild demulcent drink, highly useful in fevers and inflammatory complaints; in coughs, hectic, and consumption.

WHITE LEG *of Childbed Women.* *See* PHLEGMATIA DOLENS.

WHITE SWELLING. *See* KNEE-JOINT, *page* 355.

WHITES. A disease to which women are liable, consisting in the discharge of a thin, white, or yellow matter, from the uterus and vagina, sometimes possessed of great acrimony, accompanied by smarting in making water, pains in the back, great debility, pallid countenance, and loss of appetite. When the disease continues long, the general health is greatly impaired, the woman becomes pale and emaciated, there is a dull unhealthy appearance in the eyes, a livid circle surrounds them, and at length a dropsical affection takes place, and protracted illness and death ensue.

Causes. Irregularity in the monthly discharge, injuries done to the parts, frequent miscarriages, poor diet, a sedentary life, are among the causes which give rise to this very disagreeable and obstinate disease.

Treatment. The whites are best removed by tonics, both general and local, which last should never be omitted. Astringent lotions, made of the sulphate of zinc and rose-water, or the decoction of oak-bark, or infusions of catechu, or solutions of alum, are to be frequently injected. Cold bathing about the back and loins is beneficial; and at the same time, we may give the diluted sulphuric acid, or the elixir of vitriol, or the tincture of catechu, by the mouth. Every means must be employed to improve the general health, the patient is to be much in the open air, if she be able to take exercise; and the bowels must be kept regular. Various medicines, which are believed to have an influence on the urinary passages, are prescribed to patients with whites, with the view of their influence being exerted on the neighbouring parts; and they frequently prove of great service. Turpentine, the balsam of copaiba, uva ursi, and the tincture of cantharides, may be mentioned. Great attention must be paid to cleanliness; and the dress, the diet, and the mode of life should not be those of the idle, luxurious, and relaxed, but of the healthy, laborious, and active.

WHITLOW. An inflammation or suppuration at the last joint of the fingers; but the toes may also be the seat of whitlow. There are several kinds of whitlow, the peculiarities of which are owing to the different depths of the parts which are the subjects of the disease. 1. The suppuration may take place merely beneath the outer skin, in which case, the disease spreads a considerable way round the joint. If the abscess takes place under the nail, the pain is very severe. Emollient poultices, and giving vent to the matter, seem to be alone required in this kind of whitlow. 2. The inflammation may occur in the cellular substance of the point of the finger; in this case, the pain is considerable, and the swelling advances more slowly. The pain may extend a considerable way up the arm. Sometimes constitutional symptoms arise in this kind of whitlow; and it is necessary to use bleeding, and the other parts of the antiphlogistic regimen. Bleeding by leeches, and dividing the skin over the pained part by a crucial incision, may sometimes relieve the pain, and prevent the suppuration. If we find that we are not likely to do this, we must promote it by emollient poultices and fomentations, and open the abscess as soon as it is ripe. 3. A third kind of whitlow is marked by the most acute pain, which extends to the hand, the wrist, the elbow, and even the shoulder. With all this severe pain, there is little swelling in the affected finger; and even when matter is formed, the fluctuation of it cannot be perceived at the finger, though it may sometimes be felt at other

parts of the hand and arm. This is owing to the inflammation of the finger being seated in the sheath of the tendons, which, being strong and unyielding, are painfully stretched, but do not allow the matter to be felt under them. In this case, we must not wait till we can feel the fluctuation of matter; but we must cut deeply down through the sheaths of the tendons; and also in other parts of the hand and arm, we must make incisions, if the pain in those parts is not relieved by the opening we first made. 4. The fourth species of whitlow is that in which the periosteum, or the membrane covering the bone, is inflamed. The pain is here very acute; and as the disease advances, the bone itself is affected with caries. Here early incisions, quite down to the bone, are necessary; and when these have not availed to prevent the caries of the bone, it will be necessary to amputate one or two joints of the finger.

WHORTLEBERRY, *Arbutus uva ursi.* A small evergreen shrub, the green leaves of which, when picked from the twigs, and dried by a moderate heat, yield a powder whose taste is at first smartly astringent and bitterish, and at length leaves a flavour like liquorice. The effects of this powder are astringent and tonic; and it is used in whites, and in diseases of the urinary organs, attended with a flow of mucus along with the urine. The dose of the powder is from twenty to sixty grains in water, milk, or gruel, three or four times a-day.

WIND IN THE BOWELS. In the process of digestion, a considerable quantity of gaseous matter is extricated from the food, which, in the state of health, is productive of no inconvenience from its quantity. But when the digestion is impaired, or when the bowels have lost their tone, as physicians speak, then the symptoms occasioned by flatulence become very distressing, and require attention either as being themselves a disease, or a prominent symptom of other diseases. Flatulence is one of the most teasing accompaniments of stomach complaints, of hysteria, &c. Though it is always best to cure, if we can, the original disease, and not merely to combat certain symptoms, yet when this last indication can be fulfilled without diminishing our attention to the first, we may attempt to give relief by palliative remedies. Wind or flatulence is sometimes very much within the reach of remedies, that give at least a temporary relief. These consist chiefly of aromatic or fetid substances, which, from their speedy operation, seeming to work like a charm, are called carminatives. Of these, the principal are, cardamoms, cinnamon, ginger, valerian, assafœtida, for the administration of which, directions are given under each article. The same tinctures or infusions are also given in the way of clyster. *See* FLATULENCE.

WIND IN INFANTS. Infants are occasionally much distressed by flatulence; and in them it is quite proper to attempt its discharge, provided we are, at the same time, attentive to correct the disorder of the bowels, from which it arises. The best carminatives for children are the water and sugar of anise, with a little of the tincture of cardamoms, and solution of assafœtida. *See* CHILDREN, *Diseases of.*

WIND-PIPE. The tube which begins at the root of the tongue, and is continued into the cavity of the chest, for admitting air for the purposes of respiration. To keep this passage always open, it is composed principally of cartilaginous rings, which are not easily compressed, and is lined with a mucous membrane. At the upper part of the chest, the wind-pipe divides into two large branches, one to each lung; these branches divide and subdivide, till they end in minute air-cells, composed of a fine delicate membrane, through which the influence of the inspired air is communicated to the venous blood to convert it into arterial.

As all the food we eat and drink passes into the gullet, which lies at the back of the wind-pipe, that important tube is ad-

mirably protected by a cartilaginous lid, called the epiglottis; which, by the action of swallowing, is pressed upon the opening of the larynx, so that it is very rare indeed for any thing swallowed to go the wrong way. When this does happen, severe convulsive actions are produced.

The wind-pipe is subject to a variety of diseases. It is the seat of croup, either when its aperture is spasmodically contracted, or when the mucous membrane is impaired, and partially or totally choked up with mucus or a false membrane. The branches of the wind-pipe going to the lungs are not unfrequently obstructed in croup, and cause it to end by suffocating the patient. The wind-pipe is affected with inflammation in catarrh or common cold; and the pain may be felt deep in the chest, or at the back or sides. Coughing is a sympathetic effort of the diaphragm, abdominal muscles, and many others, to free the branches of the wind-pipe from the mucus that is oppressing or irritating them. *See* COUGH.

An operation on the front of the wind-pipe is occasionally necessary in cases of threatened suffocation, or of foreign bodies getting into the passage. It consists in a cut between the thyroid and cricoid cartilages, or dividing one or two rings at the upper part of the wind-pipe.

WINE is the produce of the fermentation of the juice of the grape, but the term is frequently applied to the product of the fermentation of any sub-acid fruits. The grape is remarkable for containing within itself all the substances necessary for the production of wine; but the juices of other fruits must have the addition of sugar and other ingredients, and in the proportions and management of these additions consists the art of making home wines. Another circumstance in which the juice of the grape differs from other vegetable juices, is its containing a large proportion of tartar; while the others have more of the malic acid, or that which abounds in apples; and hence many of the wines of this country partake of the properties of cider, and are apt to become sour. The characteristic ingredient of all wines is alcohol, or spirit of wine; on this depend their stimulating properties, and the quantity and state of combination in which it exists in wines, are the most interesting points for the consideration of the physician. Under the article ALCOHOL, we have mentioned its highly stimulating properties; and when we know by the experiments of modern chemistry, that many wines in common use contain from a fourth to a fifth of their bulk of alcohol, we at first might expect very intoxicating effects to be produced by such wines. Thus a person who takes a bottle of port, Madeira, or sherry, takes nearly half a pint of pure alcohol, or a pint of pure brandy; but it is by no means unusual, for a bottle of wine to be taken without very great inconvenience, by a person who would be exceedingly disordered both in body and mind, by swallowing a few glasses of brandy. We infer, therefore, that the alcohol in wine is both more intimately mixed with water, and exists in combination with extractive matter. Mr. Brande has constructed a table, showing the quantity of alcohol contained in different kinds of liquors, which will be found in the Appendix, No. IV.

But, besides the alcohol naturally contained in wines, the stronger wines of Spain and Portugal are rendered marketable in this country, by the addition of brandy; and it is to this additional spirit, in a free state, as chemists call it, and not to the combined alcohol, that the injurious effects of these wines are to be ascribed. Liver complaints very often follow the use of ardent spirits; and the intemperate wine-drinkers of this country are also affected with liver complaints; while on the Continent these affections are comparatively rare, owing to their wine not being adulterated by the addition of brandy.

There is a distinction of wines arising from their colour, into white and red. This colour is derived not from the juice, but from the husk of the grapes. It is

in general highly astringent, and abounds most in the red wines. Though the quantity of astringent matter is so very small, yet delicate stomachs are much affected by it. Many persons get heartburn by drinking port; and in others, its astringency does good. Every person must find out for himself which wines agree best with him; but in general, the white wines are to be preferred.

The flavour peculiar to different wines, depends on some very delicate principle, which chemists have not been able to detect; in some wines it produces a remarkable effect on the nervous system, as in Burgundy; the excitement produced by this wine being very peculiar, and not at all in proportion to the alcohol contained in it. Some wines have an artificial flavour imparted to them, by the introduction of foreign ingredients, as almonds and turpentine. Such admixtures are rather to be regarded as injurious to the wine; and occasion in some cases indigestion, giddiness, and other bad effects, which the unmixed wines do not produce. Wines also contain a small portion of acid, but so very small, as to be in all likelihood incapable of causing any bad effects to those who drink them. Acidity of stomach may unquestionably follow the drinking of wine, but from other causes than the mere portion of uncombined acid. This same acid has also been blamed with equal injustice, for giving rise to a fit of gout. Claret has been particularly suspected of this bad tendency; but when a person is predisposed to gout, excess of any kind, either in diet, exercise, or wine, will produce the paroxysm.

Wine is well known to improve by keeping, and to exert less injurious action on the stomach when old, than when new. In red wine, this is owing to its parting with a quantity of cream of tartar, in combination with extractive and colouring matter; which deposition is commonly called the crust; and thus is removed a considerable portion of matter, that would be likely to disagree with the stomach. Madeira is very frequently sent a voyage to the East Indies, and the motion and increased temperature thus imparted to it, certainly improve its flavour.

The general effect of wine on the healthy body, when taken in moderation, is to strengthen the muscular system, to assist digestion, to quicken the circulation, to exhilarate the spirits, and to sharpen the mental energies. But at the same time, it must be inculcated, that these strengthening and exhilarating effects are of the most insidious nature, that when carried beyond moderation, they pervert the faculties, degrade the rational nature, create a morbid craving for the repetition of the indulgence, and lay the foundation for a long train of sufferings and disease. The use of wine, though certainly not to be stoically proscribed, requires to be carefully regulated; and the utmost vigilance will be necessary, to prevent the formation of intemperate habits.

As a medicine, wine is one of the most valuable ever imparted by Providence to man. In many diseases of debility, and in the state of convalescence, it supplies a restorative for which no substitute can be found; and excepting in inflammatory and apoplectic cases, there are few diseases in which some kind of wine may not be useful. In the debilitated state which follows the high excitement of fever, of small-pox, and various other complaints, the quantity of wine, which is absolutely necessary, is really great; but in the better practice of modern times, a more judicious treatment in the beginning of the disease, has rendered the marvellous potations of wine so celebrated in former days, a very rare occurrence. The quantity of wine that may be taken with impunity, says Mr. Brande, and the proportion requisite to fulfil certain indications in disease, is entirely dependent on their quality; and they accordingly either produce the genial effects of genuine fermented liquors, or the more boisterous excitement of the products of the still, even when taken with due moderation. Thus it is, that a single glass

of tavern-wine often heats and creates headach, and disturbs digestion, in persons who are not habitually accustomed to the compounds which, at such places, are distributed under the name of wine. A mixture of different wines is a common source of indigestion, and the stomach is often hurt by the use of a wine to which it has not been accustomed. The stronger wines, as Port, may be in many instances usefully diluted with water, but the lighter wines do not require it.

Wines, with respect to their dietetic properties, have been arranged as follows. 1. Sweet wines. 2. Sparkling or effervescing wines. 3. Dry and light wines. 4. Dry and strong wines. Sweet wines contain a great proportion of extractive and saccharine matter; and generally the least portion of ardent spirit. A proportion of sugar has remained unchanged during the formation of the wine; which is therefore to be considered as a mixture of wine and sugar. This sugar renders them liable to become sour on weak stomachs; but where this effect does not take place, they are generally beneficial to invalids. The principal sweet wines are Frontignac, Canary, Tokay, Tent, and Malmsey. Sparkling wines are indebted for this property to the carbonic acid which they contain. Such wines intoxicate rapidly, from the alcohol in combination with the gas being applied suddenly, and in a very divided state, to a large extent of nervous surface; their effects generally soon pass off. Champagne is a notable instance of a sparkling wine. Dry and light wines are the more esteemed German wines, as Hock, Rhenish, Mayne, Moselle, Necker, and Elsass; and the highly flavoured wines, Burgundy, Claret, Hermitage, &c. The first named combine the effect of an acid, with that of a spirit. They are to be preferred as not containing any uncombined alcohol. Dry and strong wines are Madeira, Port, and Sherry.

Home-made wines are generally injurious to delicate stomachs, as they are apt to ferment, and so to promote indigestion; owing to their containing a large quantity of unfermented sugar, or becoming sour in consequence of the production of a little vinegar. The acidity and indigestion which are induced by wine, may be corrected in some measure by the use of a little magnesia at bedtime, which saturates the acid in the stomach, and passes off by the bowels.

WOMB, *Uterus.* The organ in the female body, in which the embryo lives and grows till the time of birth. It is shaped something like a pear, with the broad end uppermost. Its broadest part is called its *fundus;* it has also a body and a neck: its mouth opens into the vagina. In the unimpregnated state, it would hardly contain a kidney-bean, but at the full time, it expands sufficiently to contain one or more children, with their waters, membranes, and after-births. At the upper part of the womb, two broad membranous expansions arise, and are the means of its attachment to the sides of the pelvis; in the doublings of these expansions are situated the ovaria, believed to be the receptacle of the vesicles, which are afterwards animated; and also the tubes, first described by an anatomist named Fallopius, through which one or more vesicles pass down into the uterus, there being an opening at each side of the fundus. Sometimes the embryo grows in one of these tubes, instead of getting into the uterus. Such extra-uterine conceptions are generally fatal to the mother and child. From the womb proceeds the monthly discharge.

The sympathies of the womb with other parts are of the most general and extensive kind. Not even the stomach itself has more influence on the rest of the system. When the state and contents of the womb are altered by pregnancy, the stomach, the bowels, and digestive functions are in very frequent instances exceedingly deranged. The brain and nervous system, the function of respiration, and the state of the breasts are all very much influenced by the condition of the womb.

The womb is subject to a variety of disorders, the most common and important of which are as follow.

1. *Bearing down or falling down* signifies that the womb is lower than it ought to be. The first symptom is an uneasy feeling in the lower part of the back, while the patient is standing or walking; with a sense of pressure or bearing down. As the complaint increases, a swelling appears to come in the way of the discharge of urine, which the patient cannot pass, without lying down, and pushing aside the tumour which prevents it. In more advanced and severe cases, the womb is forced altogether out of the parts, as a hard and bulky substance hanging between the thighs. In many cases, the protruded parts are ulcerated, and give great uneasiness by their being fretted. Many complaints arise in other parts of the system from this local disease. There is sickness, and other disorders of the stomach and bowels, with hysterics and nervous affections; while the inability to take exercise is itself a great evil, and tends to impair still more the general health.

Causes. Every woman should know these, and avoid them as far as possible. Whatever tends to weaken the general system or the passage to the womb, may give occasion to its falling down. In the unmarried state, all violent or long continued exercise when the person is unwell, has a tendency to bring on the complaint; hence young women, at these times, should avoid dancing, riding, and long walking or standing. Married women have it brought on by frequent miscarriage, improper treatment during labour, and taking much exercise too soon after delivery.

Treatment. When the disease has occurred recently, and is not very bad, the system is to be strengthened by nourishing diet, by the cold bath, by moderate exercise; and a mild astringent fluid is to be thrown into the passage. This may be made of twenty grains of white vitriol to a pint of rose-water. But when the complaint is of longer standing and more severity, the patient must be confined to the horizontal posture; bark and wine, and chalybeate medicines must be employed, and a stronger astringent, as a decoction of oak-bark, with some acid added to it, must be thrown up. Sometimes these means are all ineffectual, and an instrument of wood or ivory, called a pessary, must be worn, to fill the outer passage and prevent the womb from falling down. This instrument should be removed every two or three days, and cleaned. Sometimes this soon effects a cure; but, in general, it requires to be worn for years. If a person, liable to this disease become pregnant, it disappears about the third or fourth month; and if proper measures be taken after delivery, the return of the complaint may be prevented in many instances.

2. *Tumours or Polypi in the* Womb *and Vagina.* These are of various sizes and consistency; they are sometimes broad and flat at their base, sometimes they have a narrow neck. They occasion a discharge of blood at times; but when small, they are not productive of much inconvenience. But if they become large, they give rise to symptoms both troublesome and dangerous. There is violent bearing down pain, discharges of blood, or of fetid dark-coloured matter from the vagina, pain or difficulty of making water, irritation of the rectum, and a frequent desire to go to stool. When very large, the polypus hangs out from the passage. If the disease be not relieved, the pains become more violent, the constitution is affected, and the continual discharge greatly weakens the patient.

Treatment. As the patients themselves cannot distinguish tumours from other diseases producing similar symptoms, their existence must be ascertained by the examination of a practitioner; and their removal effected by a surgical operation, either by the knife or by ligature, performed by a surgeon well acquainted with the structure and connexions of the parts. No internal remedies will do any good till the tumour is removed. When

this is accomplished, the general health is to be improved by proper diet and tonic medicines.

3. Womb, *Cancerous affections of.* These, when in a state of ulceration, constitute one of the most deplorable diseases which can afflict humanity. Cancer of the womb most generally attacks at the decline of life, though not exclusively so. At first, the patient has an uneasy feeling of weight at the lower part of the belly, with heat or itching. Afterwards, shooting pains occur; then a pain, giving a gnawing burning sensation, seems fixed in the region of the womb. This pain is attended by the discharge of ill-coloured, sharp matter, which irritates and corrodes the neighbouring parts. As the disease continues, almost every function of the body becomes disordered. Sickness and vomiting come on, the bowels are torpid and irregular, hectic fever, and great emaciation ensue, and the spirits are dejected and desponding. Swellings of various glands, and watery swellings of the limbs not unfrequently occur. Similar symptoms as in the early stages of cancer, may arise from other complaints in the womb, as from polypous growths; the nature of the disease should therefore be, if possible, ascertained at an early period, that the one may be removed, and the other kept from rapid advancement and ulceration, so far as we are able. Cancer in the womb appears to begin with a thickening and hardness of that organ; which we suspect, when there are pains in the thighs and back, a bearing down when the patient is using exercise, and occasional discharge of clotted blood. Our directions to the patient in such cases, are to use a milk and vegetable diet, to abstain from animal food and fermented liquors, to lose a little blood occasionally, to take frequently a dose of laxative cooling salts, and to use the warm bath.

Treatment. Of the nature of cancer of the womb, we are as ignorant as of cancer in any other part of the body; and when the disease is established, we are as destitute of any remedy. In the periods of deplorable suffering which terminate the life of the patient, we can do little more than palliate symptoms; and the whole tribe of narcotic medicines have been brought into requisition on such occasions. Opium, belladonna, hemlock, and various others, have been tried, and failed. Mercury, in every shape, is absolutely pernicious in cancer.

The melancholy distress to which patients are reduced by cancer of the womb, disposes the minds both of themselves and their friends to listen with eagerness to the promises of relief, which ignorant and interested empirics so liberally make to them. But all such promises must be met with the most obstinate incredulity. The learned, the experienced, and the candid members of the medical profession declare, that, as yet, no drug has been found capable of curing cancer by acting on the constitution; and whoever suffers herself to be deluded by the boasts of those whose only aim is to vend their nostrums, loses the time that might be better employed, and neglects those suggestions which might palliate, though they cannot cure her complaints.

4. Womb, *Inflammation of.* This seldom happens, except in the puerperal state. It may occur at different periods from delivery, to the fifth or sixth day, but it sometimes happens later. Like other inflammations, it is ushered in by shivering, followed by great heat, thirst, quick hard pulse. Pain is felt in the womb from the beginning, with a sensation of fulness and weight; also a burning heat, and throbbing. The exact spot where the pain is felt, varies according to the part of the womb that is inflamed; it may be towards the navel, or over the share-bones, or shooting backwards, or down the thighs; or it may affect the bladder with pain and suppression of urine, or difficulty of passing it.

Diagnosis. It is distinguished from after-pains by the constancy of the pain, by the heat and throbbing of the part, and by the pain being much increased on pressure

at the region of the womb. *Causes.* Inflammation of the womb is induced by difficult or tedious labour, by officious interference during labour, or by wrong methods of forcing the expulsion of the child and after-birth; by too much strong food or heating drinks; by exposure to cold during perspiration, or by using cold drinks. *Treatment.* It requires very prompt and active interference, as its progress is very rapid, and its event uncertain and dangerous. If assistance is procured in time, it may be stopped by blood-letting, both general and local, by leeches, low diet, diluent drinks slightly acidulated; with laxative medicines or clysters, and fomentations to the belly. A copious sweat, and a flow of the lochia, with relief from pain, mark the success of this plan of treatment. But we are not always so successful, for the pain sometimes becomes more acute, with throbbing, and an increase of fever, sickness, delirium, and restlessness. In these cases there is risk of mortification; and this is shown to have come on by a languid pulse, low delirium, and cold clammy sweat. Such termination happens chiefly in bad constitutions, or in those who are much debilitated. When suppuration is to take place, the pulse continues firm, and the throbbing is more violent. The matter is discharged by various outlets; the most favourable of which is the mouth of the womb, but sometimes it is discharged by the rectum, or by an opening in the groin. When the discharge is going on, the strength of the patient is to be supported by nourishing diet, the bowels are to be kept open, and bark and wine to be given. Much attention must be paid to cleanliness.

WOMEN, Diseases of. *See* Female Complaints.

WORMS. The production and growth of living animals in the various parts of the bodies of others, is one of the most curious facts in natural history. There is a mystery and strangeness about it, that secure a ready and popular acceptance of the fact as a sufficient reason for a great variety of maladies, especially those which occur in children; and an unhealthy look, a voracious appetite, and picking of the nose, though frequently originating from other diseases, or merely the effects of bad habit, are considered as quite explained, by saying the child has worms. This is so far a fortunate circumstance, for like the giving of wine, we never find any resistance to purgative medicines, provided they are called worm-powders; and attention to the bowels, with occasional purging, is one of the best modes of preserving the health of children, and of adults also. There are three different kinds of worms with which the body is principally infested; the ascarides or small white worms; the teres or long worm, like an earth worm; and the tænia or tape-worm. 1. The *ascarides* or small white worms, generally, are lodged about the extremity of the rectum, involved in the slime which abounds in that part. 2. The *long worm* is found in the small intestines, and sometimes in the stomach; and, 3. The *tape-worm* in the whole of the intestinal tube.

Symptoms. The symptoms which lead us to suspect the presence of worms in the intestines are the following: The appetite is variable and capricious, there is pain in the stomach, stinking breath, grinding of the teeth, picking of the nose, a pale countenance, hard and swelled belly. The stools are slimy and irregular, there are griping pains in the bowels, heat and itching about the anus. The general health suffers; and there is sometimes a short dry cough, irregular pulse, evening exacerbations, and wasting of the body; convulsions not unfrequently are occasioned by worms. Worms infest persons of every age, but children are chiefly liable to them. Their principal cause seems to be, unwholesome diet and bad digestion. The tape-worm is more common in adults than in children, but in them it sometimes occurs.

Treatment. Many of the symptoms above described occur in the bowel complaints of children, though there are no

worms present; and nearly the same general plan of treatment is to be pursued. There are various methods in use for dislodging and expelling the long worms from the intestines, some intended to act mechanically, as the powder of tin, which is sometimes given to the amount of one or two ounces; or the hairy pod of cow-itch, which, enveloping the worms, carries them along by the motion of the intestines. Other remedies are intended to act by their purgative quality, as turpentine, aloes, rhubarb, scammony, jalap, calomel, and the like. A powder composed of three grains of aloes, six of rhubarb, and five of aromatic powder, may be given every night for four times; and worked off on the fifth morning with a dose of senna or salts. Three grains of calomel, with eight of jalap, may be given every second night for a week. The best medicines for destroying the ascarides are preparations of aloes, either by the mouth or by clyster; a powder composed of aloes and jalap, in quantities proportioned to the age and strength of the patient, may be given every second night at bed-time, or a clyster may be thrown up, in which a drachm or two of the tincture of aloes is mixed. Other bitter purgatives and tonics, as rhubarb, wormwood, and the like, may be employed. The tape-worm is very difficult to remove. It has been attempted by the powder of the male fern, followed up by large draughts of green tea, and purgative powders. This plan certainly often proved effectual, but of late we have succeeded very well, by giving the oil of turpentine, in the dose of an ounce, or an ounce and a half. When the disease abates, or the worms are expelled, such measures are to be pursued as tend to restore health and strength; the patient is to be sent to the country, to live on a nourishing diet, and great attention is to be paid to the bowels.

WORMWOOD, *Artemisia Absinthium*, a plant having a strong and peculiar odour, and an intensely bitter and disagreeable taste. Infused in ale, it forms the drink called *purl*. It may be used as a tonic and stomachic from its bitterness, and had its reputation and its name from being supposed to be good against worms. The dose is from one to two drachms of the powder of the stalk, or an ounce of the infusion made by an ounce of the plant to a pint of water.

WOUNDS are divided into various classes according to the nature of the instrument with which they are inflicted, and the effect produced. They may be all included under the head of gun-shot wounds, simple incised wounds, lacerated or contused wounds, and punctured wounds.

1. Gun-Shot Wounds. These include not only the injury inflicted by bullets, balls, and the like, but those also which are occasioned by the bursting of bombs, shells, and the flying about of splinters, fragments of stone, &c. It is now acknowledged, that the violent injuries inflicted by firearms, depend solely on the weight, bulk, and velocity of the substance impelled, and have no connexion whatever with burning or poisoning from the explosion of the powder. A shot may occasion merely a contusion, or it may penetrate the surface and lodge in a part; or it may pierce through and through, or a large shot may tear off a limb. These different effects may be combined with the shattering of bones or the wounding of vessels, or the lodgment of foreign bodies.

Treatment. When a shot has been received on any of the extremities, the first thing for the surgeon to consider is, whether he will attempt to save the limb, or whether it be necessary to amputate. He is then to consider the propriety of immediate amputation, or if it should be delayed; and the skill and too ample experience of modern surgeons has ascertained, that in a great majority of cases, if amputation is necessary at all, immediate amputation gives the patient the best chance for his life. The following are some of the cases in which immediate amputation is necessary. 1. When a

limb is torn off. 2. When the bone and other parts are much shattered. 3. When much of the flesh and soft parts are torn away, or when the large artery of the limb is wounded. 4. When the muscles and nerves are much injured. There are other circumstances to be taken into consideration, as whether the patient is likely to be taken with proper care to an hospital, whether the wounded must be left on the field, &c.

When amputation is not to be performed, the wound is to be treated on general principles; foreign bodies are to be extracted, and incisions made where necessary, to get either at the ball or at any foreign body. It was at one time recommended, uniformly to make incisions to dilate gun-shot wounds; but this is found not to be at all necessary as a general rule, as these incisions must add to the pain and irritation which are already very great. We must not even be too anxious about getting out every foreign body, or even the ball, when to do this is very difficult; as it is probable that a suppuration will come on, and contribute to their discharge. The course and contents of the wound, when it is large enough to admit the finger, are better examined by it than with a probe or other instrument. When extraneous substances do not bring on suppuration, so as to bring them into view, and render them easily extracted, they often give rise to a fistulous ulcer. Sometimes balls and other bodies get into a place where they do no injury, and remain during the patient's life. It is an improper practice to put tents into gun-shot wounds; the first dressings should be mild, unirritating, and superficial; and to promote the separation of the bruised and dead parts, and to assist in removing the tension and swelling, emollient poultices and fomentations are to be employed; the application of leeches is also very proper, and for the general system, we must observe the antiphlogistic regimen. From the bruising and compression of the parts, there is often but little bleeding at the first, and we are to watch for a more sudden bleeding when the sloughs drop off; and therefore when the wound is near the tract of any large vessel, we should be prepared for this event, and have every thing in readiness for stopping bleeding. Care should always be taken not to remove the dressings too hastily. If the wound does not heal, but continues long to discharge matter, occasioning a wasting of the body, with hectic fever and other dangerous symptoms, amputation then becomes necessary to save the life of the patient.

The following remarks on gun-shot wounds, from the lectures of Mr. Abernethy, are judicious and sufficiently characteristic.

" I now come to speak of gun-shot wounds, and this is a kind of wound attended with the greatest possible contusion. The practice in France in Louis the Fourteenth's time, was to slit open the wound in its whole length, in order to give exit to any blood or matter—nay, they put setons through the wound. Mr. Hunter very much simplified the surgical practice in gun-shot wounds, and used, as well as recommended in his lectures, a soothing plan of treatment. Of course they are to be treated upon the common principles of surgery. In speaking of gun-shot wounds, the question is whether the ball has gone through or not, and this creates considerable anxiety to the relatives—if with a probe you can feel wadding, clothes, or the ball, why common sense would tell you to take it away; but common sense will equally tell you, not to be poking about and being over curious, for you cannot tell where the ball is gone to. It is really curious the course which balls will sometimes take; and it is founded on the laws of projectiles—a ball may strike on the abdominal muscles, and go out through the other side. It is within the compass of possibility that the ball may pass in at the belly, and by passing quite round, may come out at the same wound. When I was an apprentice, I recollect a case

which made some impression on me. My master was gone out of town, and I was called up from my bed one night to a man who had shot himself through the temple. When I arrived, there was a hole in the right temple, where the ball had gone in, and one on the opposite side, where, I took it for granted, it had come out. I of course thought the man was shot clean through the brain; but he retained his senses, and had all his faculties about him. This was puzzling enough in all conscience, but as I wished to be doing what I thought right and proper, I bled him, and ordered his head to be shaved—the course which the bullet had taken was then apparent enough, for it had travelled under the scalp, and had passed out at the opposite side, and the track of the bullet was indicated by a red line running all over the scalp. One of the strangest cases of bullet-travelling was related by Sir James Earle—the bullet went in under the bladebone and came out at the loins on the opposite side. Great stress is always laid on the necessity of extracting the ball. Nay, in almost every novel, where a duel is often the consequence of rivalry in love, do we not read that 'Sir Harry has been wounded, but the ball was extracted, and that Sir Harry was expected to recover.'

"All gun-shot wounds being very likely to produce sloughing, you should guard yourself by a double prognostic; for although no injury may be apparent at first, yet sloughing of an artery may happen, and destroy the patient by sudden hæmorrhage. A sailor was found dead in his bed one night, and the bed half full of blood—the femoral artery had been slightly grazed, and had sloughed—at first, however, the case to all appearance was going on favourably, being a slight and trivial gun-shot wound.

"Poultices are good in gun-shot wounds—and great care is to be taken that the digestive organs are tranquillized. In superficial gun-shot wounds, as a line of demarcation is set up, it will not be so difficult to trace out the bullet; but in deep-seated wounds of this nature, I again caution you not to be poking for bullets, as great irritation is brought on thereby."

II. Simple Incised Wounds, *or Cuts*, are those which are inflicted with a clean cutting instrument, and they are to be considered as the most favourable kind of wound. When the bleeding has stopped, the edges of the wound are to be brought together, and kept so by straps of adhesive plaster, or in some situations by one or two stitches; and when this apposition has been carefully made, such wounds generally heal very quickly, without any suppuration taking place.

III. Lacerated and Contused Wounds are those where there has been much tearing and bruising of the soft parts; they heal less kindly, and suppuration is almost always a stage of the process. When a part is torn we are to place it in its natural situation, and retain it there if possible; but if there appears little likelihood of its uniting again to the neighbouring parts, it is better to remove it; and we are to diminish the swelling and inflammatory symptoms which commonly attend contused wounds, by cooling lotions, or by emollient poultices.

IV. Punctured Wounds are such as are inflicted with a pointed instrument, as a thrust from a bayonet, a short sword, a graver's tool, or the like. The first thing to be guarded against in such wounds, is the coming on of inflammation. If there has not been much bleeding from the wound, we may take blood both generally and locally, and we are to employ the antiphlogistic regimen. Punctured wounds on the scalp, over tendinous places, or parts which are thinly covered, as the bones of the leg, are apt to be followed by an erysipelatous inflammation of the skin. It may sometimes be necessary to enlarge the wound a little, in order to remove the stretching of the parts; and to lessen the inflammation, leeches and fomentations are proper.

WRY NECK. A long-continued or permanent turning of the head to one

side. It is different from the pain and stiffness which occur from cold and rheumatism, and which prevent the free motion of the head; and arises from various morbid conditions of the part, either from distortions of the vertebræ, from palsy of some of the nerves going to the muscles that move the head, or from some altered structure of the muscles themselves. The removal of this affection, when possible, is accomplished by treatment adapted to the particular cause inducing it. The bones of the neck may be aided by machinery, if the subject is young; blistering, friction and shampooing long persevered in have been of service in the paralytic affections of the nerves and muscles; and at one time it was a favourite practice to cut across the large muscle extending from the ear to the breast-bone, which was generally supposed to be in fault. This severe measure very often was unsuccessful, and is hardly ever to be recommended.

Y

YAW

YAM. "An esculent root, obtained principally from three species of *Dioscorea*, the *alata*, *bulbifera*, and *sativa*. They grow spontaneously in both Indies, and the roots are eaten, as the potato is with us, promiscuously. There is great variety in the colour, size, and shape of yams; some are generally blue or brown, round or oblong, and weigh from one pound to two. They are esteemed, when dressed, as being nutritious and easy of digestion, and are preferred to wheaten bread. Their taste is somewhat like the potato, but more luscious. The negroes, whose common food is yams, boil and mash them. They are also ground into flour, and made into bread and puddings. When they are to be kept for some time, they are exposed upon the ground to the sun, as we do onions; and when sufficiently withered, they are put into dry sand in casks, and placed in a dry garret, where they remain often for many seasons, without losing any of their primitive goodness." (Hooper's *Medical Dictionary*).

YAW

YAWS, a tubercular disease; the *Frambœsia* of Willan; it is accompanied with small, hard, superficial tumours. The nature of this disease, which is indigenous in Africa, and has been thence conveyed to the West Indies and America, has been imperfectly investigated by European practitioners. The eruption of the yaws sometimes commences without any precursory symptoms of ill health; but it is generally preceded by slight fever, with languor, debility, and pains of the joints, resembling those of rheumatism. After several days, minute protuberances appear on various parts of the skin; at first smaller than the head of a pin, but gradually enlarging to the size of a sixpence; they are most numerous and large in the face, arm-pits, groins, and about the anus. The crop is not completed at once; new eruptions appear in different places, while some of the earlier ones dry off. When the cuticle is broken, a foul crust is formed on the surface, from under which, red fungous growths often spring up, from the size of a small raspberry to that of a large mulberry, which fruit they sometimes resemble from the granulated surfaces. In children, the duration of the yaws is from six to nine months; in adults it is seldom cured in less than a year, and sometimes continues during two or three. The tubercles are not painful except on the soles of the feet, where they are compressed by the hard skin; here they render walking

painful, or hinder it altogether. They never suppurate kindly. When they appear on any part of the body covered with hair, this gradually changes in its colour from black to white. The tubercles leave no depression of the skin. When they no longer increase in size, the disease is supposed to have attained its acmé; and at this period, one of the pustules becomes much larger than the rest, equalling or surpassing a half-crown piece; its surface is foul and sloughy, and pours out an ill-conditioned matter which corrodes the surrounding sound skin; this is called the *master*, or *mother-yaw*.

The yaws is propagated solely by the matter being applied to the wounded or broken skin of another person, who has not previously undergone the disease. The complaint is sometimes inoculated by flies, in those hot countries where the skin both of the diseased and the healthy remains uncovered. Hence, Dr. Bancroft says, few ever receive it, whose skins are whole, for which reason the whites are rarely infected; but the bodies of the negroes being often raw by whipping, and suffered to remain naked, they scarce ever escape it." (We may here observe, that this incidental notice, this unintentional glimpse of West Indian manners, occurs in a merely medical description.) Like the feverish eruptions, the yaws affects the same person only once during life; but unlike them, it is not propagated by effluvia.

Treatment. Active evacuations retard the natural progress of the disease; and mercurials, although they suspend it, and clear the skin of the eruption, yet leave the patient still impregnated with the virus, which speedily shows its presence, by a re-appearance of the symptoms more severe and tedious than before. Unless any urgent symptom should require alleviation, it is advisable to dispense with the administration of medicine, and restrict the patient to a moderate and temperate regimen, during the first stage of the disease. When the eruptions begin to dry, the disease requires a light, but nutritious diet; dry and wholesome air, warm clothing, moderate exercise, and a course of tonic medicine, as sarsaparilla and bark, with the mineral acids. If the master-yaw remains large and troublesome, it is to be treated with gentle escharotics. (Dr. Bateman).

YEAST. The scum which collects on beer while fermenting, and which has the property of exciting fermentation in various other substances. Yeast has the property also of preventing putrefaction; and it is added to poultices which are applied to gangrenous sores.

YELLOW FEVER. A dangerous fever, of the typhoid kind, common in the West Indies and America; and, with some little variety, occurring too often in Spain and Gibraltar. The yellow fever, like many others, attacks with lassitude and chilly fits, faintness, giddiness, and flushing of the face, thirst, pain in the eye-balls or forehead, pain in the back, scanty and high-coloured turbid urine; irregular and diminished perspiration; the tongue is covered with a dark fur; the bile is secreted in unusual quantity, and being forced up into the stomach, is vomited; the skin is hot and dry. As the disease advances, the eyes become of a deep yellow, and the face and breast are of the same colour; there is an incessant vomiting of frothy bile; great costiveness prevails, and delirium comes on. The fever sometimes remits so much about the end of thirty-six hours, that the patient thinks himself comparatively well, but the symptoms soon return with great aggravation, and extreme debility. In the last stage of the disease, the debility is very great, and symptoms of universal putrescency occur, large livid patches are observed, the tongue becomes dry and black, the teeth are incrusted with dark fur, the body exhibits a livid yellow, blood flows from the mouth, ears, and nostrils, dark and fetid stools are discharged, hiccups come on, the pulse sinks, and death soon follows. The order and severity of the symptoms vary in differ-

ent cases; some are seized very suddenly, and fall down insensible; others, for a few days have the warning signs of costiveness, defect of appetite, pain in the head, yellowness of the eyes, hoarseness and sore throat, lowness of spirits. In the great majority of cases, there are evident remissions or intermissions. All kinds of persons are affected by it, but those principally who are in the prime of life; men more frequently than women. People of colour have the disease milder than others.

Causes. "The violence and fatality of this disease have directed very powerfully the attention of physicians to its nature. As it obviously occurred at the period when the autumnal remittents were common on the American continent, and in the southern parts of Europe, it was highly probable that this was only the usually returning epidemic, from accidental circumstances rendered more violent and fatal. But when its nature was more closely examined, it seemed highly probable that it was a typhus attended with bilious symptoms, rather than a remittent of a peculiarly malignant kind.

"When the violence and malignity of the disease were ascertained, no country was willing to claim the destructive visitant. It was supposed to be an importation, and probably was so. At Martinique it was the fever from Siam: in America from Bulam. From a careful examination of all the facts, it appears probable that some contagion, uniting with the epidemic tendency of the bilious autumnal remittent of the country, has produced the destructive monster. The observations in Philadelphia seem to trace the yellow fever to some foreign importation. At Martinico, at Grenada, and Jamaica, there appears always to have been a concurring cause. It is doubtful, however, whether this is constantly contagion. The putrefaction of vegetable and animal substances, which in any situation may occasion ague or typhus, in concurrence with the autumnal remittent, may produce the yellow fever.

Diagnosis. "These views will discriminate it from the *causus*, (or violent tertian remittent), from the jail and hospital, as well as from the common bilious fever. In the jail fever, there is little accumulation and discharge of bile: in the others, little of the debilitated and putrefactive state. The yellow fever and the plague are, we think, referable to putrefaction; and the distinction is not an object of curiosity and refinement only, for it assists in directing the cure, particularly the exhibition of the Peruvian bark. Much idle—it is an improper word—many highly pernicious disquisitions have been indulged, whether this fever is contagious. The existence of a doubt shows that it may not be highly so. Yet it has, in so many instances, been communicated from an infected person, that the utmost caution is requisite. It has been even doubted whether the plague is contagious; but those who have suggested and disseminated the doubts, are answerable for the lives of thousands, and in some instances have paid the forfeit with their own." (Dr. Parr.)

Some of the circumstances in which yellow fever differs from typhus are these: the yellow fever prevails only during or after hot seasons, and is stopped by the coming on of winter; the reverse of which is true of typhus. The yellow fever attacks principally the young and robust, but typhus is most formidable to the debilitated; its symptoms are different from those of typhus, and it remits or intermits, which typhus does not do. Yellow fever, among other marks of difference from the plague, has no carbuncles or glandular swellings.

Prognosis. We are to judge of the degree of danger in yellow fever, by the nature of the symptoms, the violence of the attack, and the age and habits of the patients. The young and plethoric are always in the greatest danger. When the various functions are oppressed at once, when the debility is great, when the pulse is weak and irregular, when there is severe vomiting of dark matter,

fainting on very slight exertion, dilated pupils, and great drowsiness, these are signs of extreme danger. It must, however, be borne in mind, that though the disease may exhibit more favourable symptoms, yet these may suddenly change for the very worst.

Treatment. Unhappily there has been much controversy respecting the most proper treatment in yellow fever. Some employ bleeding at the commencement; but the great majority of practitioners decidedly condemn this practice; and even in cases in which, if any where, it would appear proper, viz. in young and plethoric Europeans, at the first stage of the disease, it has not seemed to be of any service. In a disease of so much danger, where so many are attacked, and such numbers die under every treatment, it is to be supposed that there will be much diversity of opinion. An inflammatory tendency at the beginning is obvious, and this is to be counteracted by purgatives, principally by calomel, as its much smaller bulk renders it less likely to be rejected by the stomach than other medicines. If the purgatives do not act speedily, we are to give a clyster. Emetics are very dangerous, as the stomach is so irritable; and in the course of the disease, a vomiting too often comes on, which is beyond our power to check. It is beneficial to promote a discharge from the skin by Dover's powder, by the warm bath, and fomentations to the belly. Some have placed great reliance on mercury, either given in the form of calomel, or introduced into the system by rubbing in the blue ointment; and though some have too highly extolled this plan, there is no doubt, that in most of the febrile diseases in the tropical climates, mercury is one of the principal remedies. If the vomiting at the commencement of the disease relieves the stomach of the indigested aliment, it is so far well; but too often the vomiting does not stop; and to check it, we must employ effervescing draughts, opium to the pit of the stomach, or a blister. Mustard poultices applied to the feet sometimes stop the vomiting. The cold affusion may be serviceable; but probably still better, the spunging of the body with some cooling lotion. Several West Indian and American practitioners speak very favourably of the cold affusion, with which they conjoin the use of calomel. When the symptoms of debility and putrescence are apprehended, our remedies must be of the stimulant and antiseptic kind; as wine, bark, Jamaica pepper, ripe fruits, and the muriatic acid. The same attention to cleanliness about the beds, the chambers, and the persons of the sick, as we have recommended in Fever, is to be attended to here; and the patient's strength is to be supported by such mild and easily digestible nourishment as his stomach can bear, such as sago, tapioca, rice, arrow-root, with a little wine.

Conduct to be pursued by Europeans for the Prevention of Yellow Fever. The fatality of yellow fever to new-comers in the West Indies, renders it a highly interesting inquiry, how Europeans should conduct themselves on arriving in these climates, and during their residence there. Some advise that the plethoric and robust should lose blood when they arrive in tropical climates; but there is too much reason to fear subsequent debility, and it will be better to diminish the inflammatory tendency, by attention to keep the bowels open, and by prudence and temperance in eating and drinking. All unnecessary exposure to the sun and the night-dews should be avoided, intoxication carefully shunned, and irregularity of every kind abstained from. When a person has it in his power, he should endeavour not to arrive in the rainy unhealthy season. He should prefer a situation for his house elevated and dry, and not exposed to the effluvia from stagnant waters and marshy grounds. The diet of Europeans should have a considerable proportion of vegetable food; spirits and water should be avoided; but a moderate use of wine may be necessary from former habits, and will prevent the relaxation and debility which

the enervating climate is apt to produce. The bowels should be kept regularly open; but the frequent and indiscriminate use of calomel is wrong. Persons should go to bed early, and rise early in the morning, which is the best time for taking gentle exercise. Cotton should be worn next the skin, or thin flannel, if there is any tendency to rheumatic affections. When the body or feet have got wet, the clothes should be changed as soon as possible.

YELLOW GUM, *of Children.* *See* GUM.

Z

ZIN ZIN

ZINC *or* SPELTER is a metal of a bluish white colour. When it is rubbed for some time between the fingers, they acquire a peculiar taste, and emit a very perceptible smell. As zinc is one of the most easily oxidized metals, it is employed in the formation of galvanic batteries. When zinc is alloyed with copper, in different proportions, it forms brass, pinchbeck, Prince Rupert's metal, &c.

ZINC, *Acetate of.* A solution of this salt is used as a wash in ophthalmia, and as an injection in gonorrhœa.

ZINC, *Carbonate of, Calamine, Lapis Calaminaris,* is usually of a greyish, yellowish, or pale reddish colour. One part of this substance very finely powdered, and added to five parts of simple cerate, forms an excellent application for cutaneous ulcerations and excoriations; and is a good dressing for burns, after the first violence of their symptoms is over. This cerate resembles that called Turner's cerate. The powder of calamine is sometimes sprinkled on ulcerating surfaces.

ZINC, *Oxide of.* This oxide has been used in epilepsy, in the dose of from two to ten grains, two or three times a-day; but with no very remarkable effects. An impure oxide of zinc, well known by the name of *tutty,* is dusted upon the parts of infants which are liable to be chafed by rubbing against each other, as the groins, neck, arm-pits, &c.

ZINC, *Sulphate of, White Vitriol,* is tonic and astringent, and in large doses, acts as an emetic. It produces very speedy vomiting; and is, therefore, used to evacuate the stomach when an overdose of laudanum, or other vegetable poison, has been swallowed. The dose for this purpose is thirty grains. In doses of two grains, twice a-day, it is used in indigestion. In hooping-cough, and other spasmodic coughs, one grain of the sulphate of zinc, and four grains of myrrh, twice a-day, have a good effect. It is used, of the strength of two grains to the ounce of spring-water, or rose-water, as a wash for the eyes; also for sore nipples, and as an injection in the whites. The white vitriol of commerce should not be used in medicine, as it generally contains impurities, principally the sulphate of copper.

APPENDIX.

No. I.

OF THE USES AND DOSES OF MEDICINES.

In giving an account of diseases and their remedies, we have endeavoured to be as distinct and intelligible as possible; and to put it in the power of any sensible parent to know what should be done, in most of the usual diseases to which children are liable. But, on the other hand, we have been careful to give no encouragement to nursery or domestic quackery. When it is considered, what unexpected difficulties present themselves to the most experienced, even in the management of complaints apparently very simple, no prudent person, not brought up to the medical profession, would venture to treat a case of any severity; and in a large town, there can be no motive or temptation to do so, where professional assistance can immediately be had; and where drugs can be readily procured, almost at any hour of the day or night. But there are many conceivable situations, where advice cannot be easily procured, yet something must promptly be done. In the smaller class of vessels which must go to sea, often on distant voyages, without a regular surgeon; in the lonely glens or retired hamlets in the country, in the distant missionary station, or the small commercial factory, some knowledge of the powers and quantities of medicines is highly useful. It is for the sake of persons in these, and similar situations, that we here subjoin a short notice of the uses and doses of some of the safer medicines.

The doses of medicines mentioned in the following list, are those which are sufficient for a grown-up person of moderate strength. For young persons under fourteen years of age, they must be diminished in nearly the following proportions. If the dose for a person of twenty years be twenty grains, then for one of

14 years	it will be	14 to 16 grains.
7	.	10 grains, or about one-half.
5	.	7 to 8 grains, one-third.
3	.	5 grains, one-fourth.
1	.	3 grains, one-seventh.
6 months		2 grains, one-tenth.

We shall mention separately the doses of medicines proper for infants and very young children.

The doses of medicines should always be weighed or measured, not guessed. Those who are likely to be engaged in administering them, should have a graduated measure, for *minims*, (two drops), for drachms, and for ounces. Sixty drops are considered equal to a drachm; but the size of drops varies, according to the size of the phial containing the liquid, the shape of the rim, and the quantity contained in it. A tea-spoonful is considered equal to a drachm, and a table-spoonful to half an ounce. A set of apothecaries' weights should be kept.

EMETICS, *Medicines to produce Vomiting.*

FOR GROWN-UP PERSONS.

Powder of Ipecacuan.—Dose from ten to twenty grains; may be given in any fluid. When there is any choice of time, the best time is the evening.

Tartrate of Antimony called *Tartar Emetic.*—Two grains dissolved in four ounces of hot water: a table-spoonful every ten minutes, till vomiting occurs.

Wine of Antimony.—Dose two tea-spoonfuls every fifteen minutes, till vomiting is produced.

Sulphate of Zinc, White Vitriol.—Thirty grains, when a speedy emetic is wanted, as in cases of poisoning.

A dessert-spoonful of Mustard may be taken when other emetics are not at hand; or the stomach may be emptied by tickling the fauces with a feather, or the stomach-pump may be used.

FOR INFANTS AND YOUNG CHILDREN.

Ipecacuan in powder.—From three to twelve grains.

Wine of Ipecacuan.—From one to two tea-spoonfuls every quarter of an hour, till vomiting occurs.

LAXATIVES AND PURGATIVES, *to open the Bowels.*

FOR GROWN-UP PERSONS.

Saline Purgatives, as the sulphate of soda (Glauber's salts); sulphate of magnesia (Epsom salts); tartrate of potash and soda (Rochelle salts); dose of each, an ounce, dissolved in four ounces of tepid water, and taken in the morning.

Phosphate of Soda, (tasteless salts,) six drachms; may be taken in broth or beef-tea, instead of common salt.

Castor Oil.—From half an ounce to an ounce.

Senna Leaves.—Three drachms infused in half a pint of water, like tea; a spoonful of preserved tamarinds adds to its efficacy, and renders the medicine more pleasant.

Sulphate of Potash with Sulphur, (sal polychrest,) from one to two drachms.

Scammony, in powder, from three to eight grains.

Jalap, in powder, from ten to twenty grains.

Gamboge, from two to five grains.

Rhubarb in powder, from ten to twenty or twenty-five grains.

The above medicines may be usefully combined with from three to five grains of calomel. Two of them may be also combined together, as jalap and scammony, or gamboge and rhubarb.

Aloes.—An excellent purgative; dose five grains; may be taken in pills, with various combinations. *See* page 23.

Calomel is seldom used alone as a purgative; but in some persons, a few grains, from two to five, move the bowels freely.

Compound Powder of Jalap, from forty grains to a drachm.

Oil of Turpentine, in obstinate cases, an ounce or two.

FOR INFANTS AND YOUNG CHILDREN.

We may here repeat, what we have said under Weaning, that the bowels of infants are not to be teazed with medicines at that period; and we may extend the prohibition

both before and after, and recommend that they should never be given except on occasions of real and obvious necessity. The bowels of children certainly require to be watched with the utmost attention by those who have the care of their early years. In the playfulness and vivacity of youth, they are apt to neglect the calls of nature, and are in much danger of hurting themselves by the mixture of articles which they eat; but, in general, they may be kept right by a very moderate allowance of drugs; and the delicacy of their bowels and other parts of the digestive organs is so great, that parents and nurses should be very cautious how they tamper with them. It was at one time very much the fashion in domestic medicine, to use CALOMEL on every trifling occasion; but however convenient it may appear from its small bulk and insipidity, we have (page 93) given what we consider as a proper caution against its indiscriminate use.

CASTOR OIL.—From a tea-spoonful to a dessert-spoonful.

MANNA.—From half a drachm to two drachms.

GAMBOGE.—From one to two grains.

SCAMMONY.—From one to three grains.

JALAP.—From four to eight grains.

RHUBARB.—From two to twelve grains.

MAGNESIA.—From five to fifteen grains.

INFUSION OF SENNA, of different strength, according to circumstances.

Two of the above medicines may, on some occasions, be usefully conjoined, as rhubarb and magnesia, or jalap and scammony; or the infusion of senna may be sweetened with manna.

LAXATIVE AND PURGATIVE CLYSTERS.

FOR GROWN-UP PERSONS.

Take of Common Salt, a dessert-spoonful,
Tepid Water, or Water-Gruel, an English pint,
Add a table-spoonful of Sweet Oil, or Melted Butter.

A more active clyster is made as follows:—

Take of Strong Infusion of Senna, an English pint,
Glauber's Salt, or Epsom Salt, an ounce and a half.

Sometimes, to increase the purgative effect, a spoonful of oil of turpentine, may be added.

FOR INFANTS AND CHILDREN.

Clysters may be made in the same way as for adults, diminishing the quantity of fluid, and keeping out a portion of the stimulating ingredient, whether salt or senna.

CARMINATIVES, *to expel Wind.*

FOR GROWN-UP PERSONS.

Ten or fifteen drops of the ESSENCE of PEPPERMINT, on a small bit of sugar.

ASSAFETIDA PILLS, three at bed-time.

CARMINATIVE CLYSTER:

Take of Infusion of Senna, eight ounces; dissolve in this infusion
Assafetida, a drachm and a half; add
Peppermint Water, one ounce.
To be mixed together; and thrown up, pretty warm.

FOR INFANTS AND CHILDREN.

SUGAR OF ANISE, two grains.

BARLEY-CINNAMON WATER, one or two tea-spoonfuls.

ESSENCE OF PEPPERMINT, from one to three drops.

DIURETICS, *or Medicines that promote the flow of Urine.*

FOR GROWN-UP PERSONS.

Take of Cream of Tartar, one drachm,
Borax, half a drachm. Mix.

Dissolve in three ounces of tepid water; this quantity to be taken three times a-day.

SWEET SPIRIT OF NITRE.—A tea-spoonful in warm water, four or five times a-day.

ACETATE OF POTASH.—From twenty grains to a drachm three times a-day.

NITRATE OF POTASH, (saltpetre.)—Twenty or thirty grains in a pint of gruel. This quantity to be used as common drink in the twenty-four hours.

OIL OF JUNIPER.—Four drops on white sugar.

SQUILL.—One grain in powder mixed with powdered cinnamon, three times a-day.

DECOCTION OF BROOM-TOPS.—A pint a-day.

FOR INFANTS AND CHILDREN.

NITRATE OF POTASH, (saltpetre) one drachm.
Water, eight ounces. Dissolve and sweeten with refined sugar.

Dose. From a dessert to a table-spoonful every three hours, till the water flows freely.

SWEET SPIRIT OF NITRE, one drachm.
Water, three ounces. To be mixed together, and a little syrup added;

A table-spoonful every two hours.

A drink made by dissolving a drachm of cream of tartar in a quart of boiling water, and sweetening it with sugar, may be used, to increase the urine.

DIAPHORETICS AND SUDORIFICS, *to produce Perspiration or Sweating.*

FOR GROWN-UP PERSONS.

By regulating the doses of these medicines, and the drink of the patient, as also the quantity of his bed-clothes, we can produce a perspiration more or less copious.

ANTIMONIAL MEDICINES are excellent diaphoretics. A grain of the tartrate of antimony may be dissolved in five ounces of hot water; and a table-spoonful of this solution given every two hours, will probably occasion perspiration. The antimonial powder, three grains in a little jelly, every three hours, will have the same effect. Or James's powder, three or four grains, in honey, jelly, or marmalade, every three hours.

A mixture of narcotic and emetic medicines, makes an excellent sudorific. Such are DOVER'S POWDER, and the diaphoretic draught, made by adding thirty drops of laudanum to forty drops of antimonial wine, to be taken in an ounce of cinnamon or peppermint water.

These combinations of opium should be avoided when the skin is very hot and dry; but may be used in rheumatism and other feverish disorders, after the violent excitement is in some degree removed by bleeding or purging.

CAMPHOR.—Four grains of camphor reduced to powder by the help of a little spirit of wine, with half a grain of opium, made into a bolus; repeated once or twice at the interval of four hours.

DILUTED ACETATE OF AMMONIA, Spirit of Mindererus.—From two drachms to half an ounce, in an equal quantity of water.

Diminished doses of IPECACUAN may also be used as diaphoretics.

FOR INFANTS AND CHILDREN.

TARTRATE OF ANTIMONY, *(Tartar Emetic)* one grain, carefully dissolved in four ounces of boiling water.

Dose of the solution, from one to two tea-spoonfuls every three hours.

Antimonial Wine.—From four to ten drops, in a tea-spoonful of tepid water, every two hours.

Take of Tartaric Acid one drachm,
Carbonate of Potash, four scruples.

Dissolve each of them separately in an ounce of water, add them together, and, when the effervescence is over, add

Syrup, two drachms,
Cinnamon water, half an ounce,
Water, four ounces.

Dose, a dessert-spoonful every two hours.

EXPECTORANTS, *to bring up Phlegm from the Lungs.*

Squill.—The powder of the dried root, one grain night and morning, made into pills with powdered cinnamon or ginger.—Or vinegar of squill, a small tea-spoonful, with simple syrup, in a little peppermint water three times a-day.

Ipecacuan.—One grain three times a-day, made into lozenges.

Sulphate of Zinc.—One grain, with powdered ginger, twice a-day.

The Steam of Hot Water inhaled into the mouth.

The same may be used for children, diminishing the doses.

ABSORBENT MEDICINES, *or Correctors of Acidity in the Stomach, and of Heartburn.*

FOR GROWN-UP PERSONS.

Carbonate of Potash, or Carbonate of Soda, from ten to thirty grains, in any fluid vehicle, not spirituous.

Prepared Chalk, when the bowels are loose; from twenty grains to two drachms in cinnamon-water, or milk.

Calcined Magnesia, when the bowels are costive; to be taken in the same way. The above two articles meeting with an acid in the stomach form a neutral salt: that with chalk is binding; with magnesia laxative.

Water of Super-carbonate of Potash, or

Water of Super-carbonate of Soda.—A wine-glassful, three or four times a-day.

Lime Water.—A wine-glassful, with a table-spoonful of milk, three times a-day.

FOR INFANTS AND CHILDREN.

Calcined Magnesia, or Prepared Chalk may be given in any liquid, or mixed with the food, in doses of from three to ten grains.

ANODYNES, *Medicines to allay Pain, and procure Sleep.*

FOR GROWN-UP PERSONS.

Opium.—One or two grains. It can be made into a pill without any addition. Opiate pills may be made by taking equal weights of opium and aromatic powder, or powdered cinnamon, and forming them into a mass with simple syrup. This mass may be divided, so as to make the pills to contain each one grain of opium.

The Paregoric Elixir may be given as an anodyne. The English in the dose of four drachms in a little water, the Scotch in the dose of one drachm.

Anodyne Draught. Take of

Laudanum, thirty drops,
Cinnamon-water, an ounce:

To be sweetened with dissolved jelly or syrup, and taken at once.

ANODYNE CLYSTER. Take of

Thin Starch, a small tea-cupful;

Add to it

A drachm of Laudanum.

This is given to allay tenesmus and pain in the neighbourhood of the rectum; and also to check looseness. The patient must be made to understand, that he is to make what efforts he can to retain it.

When opium binds the bowels too much, HENBANE in extract or tincture may be used in larger doses than opium; three grains of the extract, or a drachm of the tincture.

FOR INFANTS AND CHILDREN.

These are so hazardous, that we feel reluctant to sanction the use of any one of them *internally*.

The Dose of Laudanum is from three to eight drops.

For *external* use, ANODYNE BALSAM, or the Tincture of Soap with Opium, rubbed on the belly or along the spine, in the quantity of a dessert or table-spoonful, in many cases allays pain very effectually.

ASTRINGENTS, *or Medicines to lessen Discharges of Fluids.*

FOR GROWN-UP PERSONS.

1. *In Looseness of the Bowels;* after being sure that they are cleared of all irritating matter, as much as possible.

ASTRINGENT DROPS. Take of

Tincture of Rhubarb, two drachms,

Tincture of Opium, one drachm.

Mix them together.

Thirty-six drops to be taken four times a-day in a little water.

CHALK MIXTURE. Take of

Prepared Chalk, one ounce,

Refined Sugar, half an ounce,

Mucilage of Gum Arabic, two ounces.

Triturate together, and then gradually add, of

Water, two pints and a half,

Spirit of Cinnamon, two ounces.

Of this, a small cupful may be taken four times a-day; and if it be thought necessary to increase its astringent power, ten drops of tincture of opium, or half a drachm of the tincture of kino, may be added to each dose.

2. ASTRINGENTS, *in discharges of Blood from the Stomach or Lungs.*

ELIXIR OF VITRIOL, or diluted SULPHURIC ACID, fifteen drops in cold water, four times a-day.

Infuse a handful of dried RED ROSE LEAVES in a quart of boiling water. Strain off the liquor, and add of diluted sulphuric acid thirty drops; simple syrup, two ounces. A table-spoonful to be taken every two hours, when necessary, during a discharge of blood. Other measures at the same time being employed for the cure of the disease.

3. ASTRINGENTS, *to be thrown into the Vagina for the cure of Whites.*

Thirty grains of WHITE VITRIOL dissolved in an English pint of water.

Or: Take of Oak Bark, two ounces,

Water, two English pints;

Boil into one pint; to which, when strained, add

One drachm of Alum.

ASTRINGENTS *to check Looseness in Children.*

ASTRINGENT MIXTURE.

Take of best Turkey Rhubarb, twenty grains,
Prepared chalk, one drachm,
Dover's Powder, ten grains,
Simple Cinnamon Water, half an ounce,
Spring Water, two ounces and a half.
Mix them carefully.

Dose from one to four tea-spoonfuls every six hours. This is found particularly useful in some cases of habitual looseness.

STRONGER ASTRINGENT MIXTURE.

Take of Electuary of Catechu, two drachms,
Prepared Chalk, half an ounce,
Simple Cinnamon Water, one ounce,
Spring Water five ounces. Mix them.

Dose, from two tea-spoonfuls to a table-spoonful every three or four hours. This may be rendered still more powerful in checking debilitating looseness, by the addition of a small proportion of laudanum to each dose.

(The above two prescriptions are from Professor Hamilton.)

TO CHECK VOMITING.

The EFFERVESCING DRAUGHTS. See page 227.

When there is not much fever present:

COMPOUND TINCTURE OF CINNAMON, a tea-spoonful, without any addition; or a tea-spoonful of brandy.

OXIDE OF BISMUTH.—Ten grains every two hours.

An OPIUM PLASTER to the pit of the stomach.

TONICS AND BITTERS *for Strengthening the Stomach.*

PERUVIAN BARK.—A tea-spoonful every day, in milk or port wine.

POWDERED GENTIAN ROOT.—Ten grains to twenty.

COLOMBO.—Ten grains of the powder twice a-day.

DECOCTION OF QUASSIA.—A tea-cupful twice a-day.

INFUSION OF CHAMOMILE.—An English pint in the course of the day.

The stomachic tinctures should not be taken, unless by the prescription of a medical practitioner, for fear of inducing a habit of dram-drinking.

WORM MEDICINES.

Except the NEUTRAL SALTS, almost any purgative may be used to expel worms.

Take of CALOMEL, four grains,
Powder of JALAP, eight grains,
Powder of ALOES, three grains,

To be mixed together and given in jelly, honey, or conserve of roses.

Five grains of ALOES, with three of GAMBOGE taken at bed-time, and followed next morning by a tea-cupful of strong infusion of SENNA.

A small tea-spoonful of COMMON SALT, taken in the morning when the stomach is empty.

Two or three cloves of GARLIC may be swallowed in a morning for a length of time.

Or three grains of ASSAFETIDA, made into a pill. Clysters made of senna, with a dessert-spoonful of tincture of aloes, may be thrown up, to destroy the small white worms.

A dessert-spoonful of OIL OF TURPENTINE will in many cases carry off the tape-worm.

WORM MEDICINES, as in page 587.

Diminishing the dose in proportion to the age.

FOR BURNS AND SCALDS.

On the very first occurrence of the accident, COLD is to be applied. Cold water is always at hand. A little vinegar may be added, if the skin is not broken; or we may apply sal ammoniac dissolved in water; or weak spirits and water. When the outer skin is destroyed, the CARRON OIL must be lightly applied, and the parts defended from the air. It is made by mixing together equal parts of linseed oil and lime-water. Cotton, when there is no danger of its sticking in the injured part, is an excellent protector for burnt surfaces.

EYE-WATERS.

Twelve grains of the SULPHATE OF ZINC dissolved in six ounces of Rose Water.

Twelve grains of SUGAR OF LEAD dissolved in six ounces of Spring Water; with the addition of a drachm of distilled Vinegar.

The quantity of Sugar of Lead may be increased if necessary.

GARGLES.

A good domestic Gargle for sore throats is made by using VINEGAR, diluted with warm water, and sweetened with honey or sugar.

Infusion of Red Rose Leaves, acidulated with diluted Sulphuric Acid.

Or a Gargle may be made with Port Wine and a little Vinegar.

Gargles should always be of such a degree of sharpness as to cause a temporary smarting of the throat.

DRESSINGS AND PLASTERS *for various purposes.*

For dressing blisters. Hog's lard, or spermaceti ointment.

For ulcers. Turner's cerate; or when a stimulating action is wanted, basilicon or red precipitate or verdigris ointment.

For scrofulous sores, iodine ointment, varied occasionally with cerate, or simple ointment made of wax and oil.

Adhesive plaster is used for keeping cut surfaces in contact; but in some situations, one or two stitches will be necessary accompaniments. Straps of adhesive plaster are used for giving support to the skin of ulcerated legs; and to make an equal pressure on dropsical swellings.

No. II.

OF PATENT MEDICINES.

Dr. Paris, has published a work on the Materia Medica and Pharmacy, entitled *Pharmacologia*, which is highly esteemed. In that work, he has stated the ingredients of a number of the most celebrated quack medicines; and as this is not only a matter of some curiosity, but as it may occasionally prevent serious injury, by showing the danger of being credulous with respect to the efficacy or safety of such compositions, we have taken the liberty of inserting the ingredients of some of the more noted of them; and shall occasionally subjoin a few remarks and cautions.

On this subject, it is but candid to publish the following remarks by Dr. Hancock, Stafford Place, Pimlico, which appeared in the Edinburgh Medical and Surgical Journal for January, 1831.—" I have learned to place but little confidence in the pretended examination of quack remedies. We see in several late works a display, or professed disclosure of such secrets; and in which the components are mentioned without the least doubt, as being indicated by chemical analysis. The reports we have hitherto seen published in some magazines, and repeated in the Pharmacologia of Dr. Paris, Rennie's and Gray's supplements, &c. are little worthy of regard; they have, for the most part, been got up merely under a show of science. The old nostrum, for instance, called Spilsbury's Drops, is said in those reports to contain two drachms of corrosive sublimate to a pint of the menstruum; but several samples I have examined showed no traces of this mineral; one of those I bought expressly for examination from the proprietors in Soho Square; but the sense of taste alone would show this absurdity. If it contained sublimate, although but a twentieth part so much as alleged, it would even then be sensible on the tongue. Gentlemen who give publicity to such misstatements, are not aware they are entailing much greater evils on society, than could arise from all the quackery which they are desirous to defeat. They should consider that the more saleable nostrums are prepared by many other persons besides the proprietors, and that the prescriptions thus published will be followed by numerous imitators. Let us suppose then, that a person who has been in the habit of taking large doses of Spilsbury's Drops, gets a bottle of that prepared with two drachms of sublimate to a pint of menstruum, and takes his usual dose; the result, it is plain, might prove fatal."

We are quite willing that the above remarks should have their due weight; but allowing for the few blunders that may be expected in a long and varied work like that of Dr. Paris, and for the vegetable mixtures, which defy all detection, we think the Doctor's remarks particularly valuable; and are sure that with every person of reflection and common sense, the circumstance of the double knavery of quackery in the original secret, and by the unprincipled imitators, will be quite sufficient, when made known, to put him on his guard against all such irregular physic.

Ague Drop, or Tasteless Ague Drop, extolled for the cure of intermittent fever, is ascertained to be a solution of arsenic. The simple mention of this, it is to be hoped,

will deter every person from taking this medicine at his own hand, or from any one who knows neither diseases nor their cure; more especially, as there is a similar preparation which may be used when necessary. This is made up with care under the direction of the pharmacopœia of the Royal College of Physicians; and the regular practitioner who prescribes it, will certainly watch its effects. It is called the *Arsenical Liquor*, or the *Arsenical Solution*; and is given, at first, in the dose of four drops twice a-day, which may be gradually increased to twenty-five or thirty. It is used in intermittent fever, in periodical headachs, and in some diseases of the skin. It is to be avoided when there is strong action of the arteries, or tendency to inflammation.

Anderson's Pills consist of Barbadoes aloes, with a proportion of jalap, and oil of anise-seed. They are in general safe, except when there is a tendency to piles; and in pregnancy, it is better to use other purgatives. *See* Aloes.

Antivenereal Drops are made of the muriate of iron, with a small proportion of corrosive sublimate of mercury; and almost all the boasted drops and pills which are said to cure syphilis without mercury, are found to contain corrosive sublimate; which, from its being easily disguised, and of great activity, is very convenient for the purposes of empirics, but proportionally dangerous for ignorance to employ.

Aromatic Vinegar is a solution of camphor, oil of cloves, oil of lavender, and oil of rosemary, in very strong vinegar. It is good in faintings, and other debilitating affections.

Bailey's Itch Ointment contains nitre, alum, white vitriol, and cinnabar, made into an ointment with olive-oil and lard, and perfumed with the essential oils of anise-seeds, origanum, and lavender, and coloured with alkanet root. The itch may be more easily and certainly cured by common sulphur ointment.

Barclay's Antibilious Pills. The bile, in popular medicine, is blamed as the cause of numerous diseases; and drugs, that bear the title of antibilious, are great favourites with invalids and hypochondriacs. The pills in question are merely purgative pills, which owe their active powers to the extract of colocynth and of jalap. To these substances are added tartar emetic, and the essential oils of juniper, caraway, and rosemary.

Bark, Essential Salt of. Dr. Paris says, it is highly necessary that the public should know, that the preparation sold under this empirical title has no relation whatever to the late discoveries of Pelletier. The Doctor means, those relating to the sulphate of quinine; in which the peculiar powers of bark are so wonderfully concentrated. If a person were to obtain from an apothecary's shop what goes under the name of essential salt of bark, he would be extremely disappointed if he expected the beneficial effects of the sulphate of quinine. The other is merely an extract, prepared by macerating the bruised substance of bark in cold water, and submitting the infusion to a very slow evaporation.

Bateman's Pectoral Drops consist principally of the tincture of castor, (a substance obtained from the beaver) with portions of camphor and opium, flavoured by anise-seeds, and coloured by cochineal. We must not confound the contriver of this nostrum with the learned aud judicious writer on the Diseases of the Skin.

Bates's Anodyne Balsam consists of one part of tincture of opium and two of the compound soap liniment, commonly called opodeldoc.

Black Drop.—See page 419.

Blaine's Powder for the Distemper in Dogs. The basis of this nostrum is the aurum musivum, or the sulphuret of tin. It is said to be more efficacious than the simple metal in cases of tape-worm; for which, as well as for other species of worms, it has been given to the human subject.

Boerhaave's Red Pill. Cinnabar, the sulphuret of mercury, is the basis of this pill. Those who trust to the high-sounding encomiums of this pill, must remember that its virtues, if it have any, are owing to mercury.

Brodum's Nervous Cordial consists of the tinctures of gentian, colombo, cardamom, and bark, with the compound spirit of lavender, and wine of iron. It will be seen from this enumeration, that though there are two or three tonic medicines in this preparation, there is no want of spirituous matter; and hence it is not difficult to see why this medicinal dram-drinking is in such vogue.

Cephalic Snuff is made from the powdered leaves of the asarum Europæum or asarabacca. It is a very powerful discharger of mucus from the nostrils, and occasions much sneezing. It is sometimes useful when parts about the mouth and tongue are palsied. It also removes some cases of obstinate headach.

Chamberlain's Restorative Pills, "The most certain cure for the scrofula or king's evil, fistula, scurvy, and all impurities of the blood!" These pills consist of cinnabar, sulphur, sulphate of lime, and a little vegetable matter, perhaps gum.

Chelsea Pensioner, an empirical remedy for the rheumatism; it is said to be the prescription of a Chelsea pensioner, by which Lord Amherst was cured. The following is its composition: gum guaiac one drachm, powdered rhubarb two drachms, cream of tartar one ounce, flowers of sulphur one ounce, one nutmeg finely powdered, made into an electuary with one pound of clarified honey. Two large spoonfuls to be taken night and morning.

Cheltenham Salts. A factitious compound has been long vended as a popular purgative under this name; it is formed by triturating together the following salts:—sulphate of soda (Glauber's salts) 120 grains; sulphate of magnesia, (Epsom salts) 66 grains; muriate of soda, (common salt) 10 grains; sulphate of iron, (green vitriol) half a grain. As a purgative, it is very efficacious, and superior probably to that which is actually obtained by the evaporation of the Cheltenham water itself; for, notwithstanding the high pretensions with which this latter salt has been publicly announced, it will be found to be little else than common Glauber's salt. This fact has been confirmed by the experiments of Mr. Richard Phillips, who observes, that the "real Cheltenham salts contain no chalybeate property," but are merely sulphate of soda, mixed with a minute quantity of soda, and a very small portion of common salt. It could not be imagined that the salt should contain oxide of iron even in a state of mixture, much less in combination, for carbonate of iron is readily decomposed by ebullition, and the oxide of iron is precipitated before the salt can be crystallized. A preparation, under the name of Thomson's Cheltenham Salts, is accordingly manufactured in London, by evaporating a solution consisting of sulphate of soda and sub-carbonate of soda. There are some other imitations of Cheltenham salts, but not one of them is similar to the water which is drank at the Spa; the chalybeate properties of the water being essentially altered by all the methods of preparation. (Paris.)

Ching's Worm Lozenges.—Many of the nostrums advertised for the cure of worms contain calomel as their principal ingredient, combined with scammony, jalap, gamboge, or some other purgative. They are uncertain and dangerous medicines; the method of exhibiting them in the form of lozenges (worm cakes), is also attended with inconvenience; for the sugar and the gum generating an acid, by being kept in damp places, may considerably increase the acrimony of the mercury; besides which, the calomel is frequently diffused very unequally through the mass; one lozenge may therefore contain a poisonous dose, while others may scarcely possess any active matter. Ching's Lozenges are of two kinds, yellow and brown; the yellow are to be taken in the evening, and the brown the succeeding morning. The yellow lozenges are made thus:—Take of saffron half an ounce, of water one gallon, boil and strain; add, of white panacea of mercury (calomel washed in spirit of wine), one pound; white sugar twenty-eight pounds, mucilage of tragacanth as much as may be sufficient to make a mass, which roll out of an exact thickness, so that each lozenge may contain one grain of panacea. The brown lozenges are made of panacea seven ounces, resin of jalap three pounds and a half, white

sugar nine pounds, mucilage of tragacanth as much as is sufficient. Each lozenge should contain half a grain of panacea.

The above statement is a very good specimen of the unnecessary complication, and of the hazardous operation of quack medicines. Surely every species of worm, and every kind of constitution is not to be indiscriminately dosed with jalap and calomel; and the medical man who attends a family, is certainly the best judge whether these medicines are in any case proper or not. The vulgar ascribe a great many of children's complaints to worms, without any evidence that the child is troubled with them at all; and it requires but the simple statement, to show to any sensible parent the impropriety of fancying her child to have worms in his bowels, and then throwing in mercury in the form of Ching's Lozenges, or Story's Worm Cakes. A great proportion of the diseases of children are owing to the derangement of the digestive functions; and a prudent and skilful use of calomel, combined with rhubarb or other medicines, is the most likely means to restore their healthy action. This the regular practitioner is much better qualified to direct, than those who announce one medicine as applicable to all cases, seen or unseen.

Corn Plaster. The green coloured plaster sold under this title is usually composed of three parts of wax, four of burgundy pitch, and two of common turpentine, to which is added one part of verdegris.

Cough Drops. The various nostrums advertised as "Cough Drops for the Cure of Colds, Asthmas, Catarrhs," &c. are preparations of opium very similar to Paregoric Elixir. Pectoral Balsam of Liquorice, and Essence of Coltsfoot are combinations of this kind; Grindle's Cough Drops are a preparation of the same description, only made with rectified instead of proof spirit, and consequently more highly charged with stimulating materials. "The mischief," says Dr. Fothergill, "that has proceeded from the healing anodynes of quacks can be scarcely imagined; for in coughs arising from suppressed perspiration, or an inflammatory diathesis, opiates generally do harm."

Court Plaster. Sticking Plaster.—Black Silk is strained and brushed over ten or twelve times with the following preparation: Dissolve half an ounce of benzoin in six ounces of rectified spirit; in a separate vessel, dissolve an ounce of isinglass in half a gallon of water; strain each solution, mix them, and let the mixture rest, so that the grosser parts may subside; when the clear liquor is cold it will form a jelly, which must be warmed before it is applied to the silk. When the plaster is quite dry, in order to prevent its cracking, it is finished off with a solution of four ounces of Chian turpentine in six ounces of tincture of benzoin.

Daffy's Elixir. Is the compound tincture of senna, or that made by the tincture, in proof spirits, of senna and jalap. In Daffy's Elixir, there is the substitution of treacle for sugar-candy, and the addition of anise-seed and elecampane root.—Different kinds of this nostrum are sold under the names of Dicey's Daffy, and Swinton's Daffy; but they differ merely in some subordinate minutiæ, or unimportant additions. Like other tinctures, this should not be prescribed by the inexperienced and ignorant.

Dalby's Carminative. This consists of carbonate of magnesia two drachms, oil of peppermint one drop, of nutmeg two drops, of anise-seed three drops, tincture of castor thirty drops, tincture of assafetida fifteen drops, tincture of opium five drops, spirit of pennyroyal fifteen drops, compound tincture of cardamoms thirty drops, peppermint water two fluid ounces. There are cheaper compositions sold under this name. The dose is from a tea-spoonful to a table-spoonful. *See* Dalby's Carminative, page 179.

Davidson's Remedy for Cancer is arsenious acid and powdered hemlock. Under the article Arsenic, it will be found that even the external application of that poisonous mineral is often fatal; and surely, with the knowledge of this fact, no one in his senses would venture on this application to a cancerous sore, or one supposed to be so; merely from the interested boastings of medicine venders.

De La Motte's Golden Drops. An ethereal solution of tincture of iron.

Delcroix's Poudre Subtil, "*For removing superfluous hair in less than ten minutes.*" Substances supposed to have the power of destroying hairs which are not wanted, are called Depilatories; and the fashionable one mentioned at the head of this article, appears to consist of quick lime and sulphuret of arsenic, with some vegetable powder. It is, however, so unequally mixed, that on submitting it to analysis, no two portions afforded the same results. It can scarcely be necessary to state, that such a composition is incapable of fulfilling the intention for which it is so confidently vended.

Dinner Pills. Called also Lady Webster's, or Lady Crespigny's Pills.—These are made by taking of the best aloes six drachms, mastich and red roses two drachms of each, as much syrup of wormwood as will form the whole into a mass, which is to be made into pills of three grains each. These pills are certainly useful, as they produce a copious evacuation. The mastich probably acts by dividing the particles of the aloes, and thereby modifying its solubility.

Dixon's Antibilious Pills are made of aloes, scammony, rhubarb, and tartarized antimony.

Dutch Drops. The basis of this nostrum consists of the residue of the re-distillation of the oil of turpentine, which is a thick, red, resinous matter, to which the name of Balsam of Turpentine has been given; a preparation, however, is frequently vended as Dutch Drops, which is a mixture of oil of turpentine, tincture of guaiacum, spirit of nitric ether, with small portions of the oils of amber and cloves. These drops are given in diseases of the urinary organs.

Eau Medicinale d'Husson. See page 226.

Economical Breakfast Powder is nothing more than roasted rye, which comes nearer to true coffee than the preparations made from other European grain or pulse.

Edinburgh Ointment. This name must be given by the English, for we are not acquainted with any ointment that bears the name of Edinburgh, *par excellence*. The principal ingredients are the white hellebore and muriate of ammonia.

Elixir of Longevity, of Dr. Jernitz of Sweden. This is certainly a very imposing title, which is applied to an aromatic tincture with aloes; and as attention to the bowels is really an essential point in the care of one's health, it may contribute so far to longevity.

Essence of Coffee. The Cassia pulp is said to form the basis of this article.

Essence of Coltsfoot. "This preparation consists of equal parts of the Balsam of Tolu, and the compound tincture of benzoin, to which is added double the quantity of rectified spirit of wine, and this, forsooth, is a Pectoral for Coughs! If a patient with a pulmonary affection should recover during the use of such a remedy, I should certainly designate it as a lucky escape, rather than as a skilful cure." (Dr. Paris.)

Essence of Mustard. This medicine, much vaunted as an external application in rheumatism, consists of oil of turpentine, camphor, and a portion of spirit of rosemary, to which is added a small quantity of flour of mustard. In cases of rheumatism, where an external application is proper, this substance may do good; but medical men often direct a liniment of turpentine and oil, without giving it the title of mustard, with which it has no connexion. So far does quackery go in this case, that pills are made, called Pills of Essence of Mustard, which are made of Balsam of Tolu with resin.

Essence of Peppermint, a spirituous solution of the essential oil of peppermint, coloured green by spinage leaves.

Essence of Senna. A concentrated infusion of senna, in combination with an alkali.

Essential Salt of Lemons. The preparation sold under this name, for the purpose of removing iron moulds from linen, consists of cream of tartar and super-oxalate of potass, or salt of sorrel, in equal proportions.

Ford's Balsam of Horehound consists of a watery infusion of horehound and liquo-

rice root, with double the proportion of proof spirit or brandy; to which is then added opium, camphor, benzoin, squills, oil of aniseed, and honey. This enumeration is surely enough to show the absurdity of the pretensions of this medicine to cure colds, coughs, and diseases of the lungs; and it shows the danger run by those who, without a knowledge of the tendency to inflammation of the lungs which accompanies a great proportion of the colds of this country, venture to use it.

Ford's Laudanum is similar to the vinum opii, or spirituous solution of the extract of opium, combined with various aromatics.

Fothergill's Pills, are aloes, scammony, colocynth, and oxide of antimony.

Freeman's Bathing Spirits. Compound Soap liniment, coloured with Daffy's Elixir.

Friar's Balsam. The compound tincture of benzoin. There does not seem any good surgery in the practice of applying this substance to recent cuts or wounds.

Godbold's Vegetable Balsam. "In the specification of the patent for this nostrum, *forty-two* different vegetables are directed to be distilled 'for the purpose of extracting their essences, which are to be preserved separately and apart from each other, in syrups, and are to be mixed with the following gums and drugs, viz. gum dragon, gum guaiacum, gum arabic, and gum canada, these being dissolved in double distilled vinegar, with a quantity of storax dissolved in spirits of wine and oil of cinnamon. It is to be bottled off, and kept three years before it is fit to be administered for the Cure of Consumption, or any asthmatic complaint.' It is hardly necessary to observe, that no such directions ever are, or indeed ever could be followed; in short, the Balsam is little else than simple oxymel." (Paris.) On this subject, Dr. Parr remarks: "We have reason to believe that this balsam was first prepared from the various supposed expectorants of an old herbal; since Godbold (the elder) though an ignorant, seemed an honest man; and he professed that he had given us the receipt. At present, however, it is certainly only vinegar and honey, with a proportion of laudanum and some aromatic, varied apparently at different times."

Godfrey's Cordial.—"The following receipt for this nostrum was obtained from a wholesale druggist, who makes and sells many hundred dozen bottles in the course of a year. There are, however, several other formulæ for its preparation, but they are not essentially different. Infuse nine ounces of sassafras, and of the seeds of caraway, coriander, and anise, of each one ounce, in six pints of water; simmer the mixture until it is reduced to four pints; then add six pounds of treacle, and boil the whole for a few minutes; when it is cold, add three fluid ounces of the tincture of opium. The extensive and indiscriminate use of this nostrum in the nursery, is a subject of national opprobrium, and is so considered by foreign writers. *See* Foderé, Medicine Legale, Vol. iv. p. 22." (Paris.) We are happy to say, that the reproach of using this nostrum to stupefy infants, is not applicable to Scotland, where quackery thrives in a very inferior degree. The mischiefs arising from the use of Godfrey's Cordial must have been going on for many years, as we find it enumerated in 1756, among the medicines employed by the nurses at the early periods of the Foundling Hospital, to give a long and effectual quieting to the children committed to their care.

Godfrey's Smelling Salts. This highly pungent preparation is obtained by resubliming the common sub-carbonate of ammonia with pearl-ash, and a proportion of rectified spirit.

Golden Ointment. Under this name is sold a preparation, which consists of sulphuret of arsenic with lard, or spermaceti ointment. The ointment of the red precipitate of mercury is also sold under the same title.

Gout Tincture, Wilson's. This is merely an infusion of colchicum or meadow saffron. Since the discovery of this plant being the active ingredient of the Eau medi-

cinale, numerous empirical remedies have started up, containing the principles of the plant in different forms.

GOWLAND'S LOTION is a solution of corrosive sublimate of mercury in an emulsion formed of bitter almonds, in the proportion of about three grains to two ounces. A solution of this mercurial salt in spirit of rosemary, is also sold as an empirical cosmetic.

GREEN'S DROPS. Corrosive sublimate is the basis of these drops; and of all the drops and lotions which are said to cure syphilis without mercury.

GRINDLE'S COUGH DROPS. *See* COUGH DROPS.

GUESTONIAN EMBROCATION FOR RHEUMATISM. Oil of turpentine three ounces, olive-oil three ounces, diluted sulphuric acid six drachms.

HANNAY'S LOTION, OR PREVENTIVE WASH. This famous nostrum for the prevention of syphilitic infection, was nothing more than a solution of caustic potash.

HATFIELD'S TINCTURE. Guaiac and soap, of each two drachms; rectified spirit, a gallon and a half, used as a diaphoretic.

HOOPER'S PILLS. The pills of aloes with myrrh, sulphate of iron and canella bark, to which is added a portion of ivory black.

IPECACUANHA LOZENGES. Each lozenge contains half a grain of ipecacuanha. They may be used in colds and other breast complaints as an expectorant, one every four or five hours.

JAMES'S POWDER. *See* page 351.

JAMES'S ANALEPTIC PILLS. These consist of James's powder, gum ammoniacum, and the pill of aloes with myrrh, (Pilulæ Rufi) equal parts, with a sufficient quantity of the tincture of castor to make a mass.

JESUIT'S DROPS. The same as Friar's Balsam.

LARDNER'S PREPARED CHARCOAL consists of chalk finely powdered, rendered grey by the addition of charcoal or ivory black. This is meant for a tooth-powder; but by referring to page 190, it will be seen that charcoal dentrifices are by no means to be recommended.

LIQUOR OPII SEDATIVUS. *See* OPIUM, page 420.

LYNCH'S EMBROCATION FOR HOOPING-COUGH. Olive-oil impregnated with bergamot, and some other essences, and coloured with alkanet root.

MADDEN'S VEGETABLE ESSENCE is little else than the compound infusion of the petals of the red rose, with an increased proportion of acid.

MARSDEN'S ANTISCORBUTIC DROPS. A solution of sublimate in an infusion of gentian. Diseases of the skin are certainly often benefited by the preparations of mercury, although these are quite inapplicable in the true sea-scurvy.

MARSHALL'S CERATE. Palm oil five ounces, calomel one ounce, acetate of lead half an ounce, nitrate of mercury two ounces. Used for piles.

MATTHEW'S PILLS. Of the roots of black hellebore, liquorice, and turmeric, equal parts; purified opium, Castile soap, and syrup of saffron, the same quantity, made into pills with oil of turpentine (PARIS.) The active ingredient in these pills is the black hellebore, so famous among the ancients in the cure of madness; it is to be considered merely as a drastic purge.

MATTHEW'S INJECTION. This once celebrated remedy for fistula in ano, was nothing more than a diluted tincture of cantharides.

MOSELEY'S PILLS. The stomachic pills which are sold under this name, consist merely of rhubarb and ginger.

NORTON'S DROPS, a disguised solution of corrosive sublimate.

OPODELDOC, STEER'S. Castile soap one ounce, rectified spirit eight ounces, camphor three drachms and half, oil of rosemary half a drachm, oil of origanum one drachm, solution of ammonia six drachms.

OXLEY'S CONCENTRATED ESSENCE OF JAMAICA GINGER. A mere solution of ginger in rectified spirit.

PETER'S PILLS. Aloes, jalap, scammony, and gamboge, equal parts, two drachms; calomel, one drachm.

PECTORAL BALSAM OF HONEY is merely the tincture of benzoin or that of Tolu.

PECTORAL BALSAM OF LIQUORICE. The proprietor of this nostrum gravely affirms, that an ounce and a half contains the virtues of a whole pound of liquorice root; but upon investigation, it will be found to consist principally of paregoric elixir, very strongly impregnated with the oil of anise-seed.

PLUNKETT'S OINTMENT FOR CANCER. This ointment consists of arsenious acid, sulphur, and the powdered flowers of the ranunculus flammula and cotula fetida, levigated and made into a paste with the white of an egg, and applied on a piece of pig's bladder to the surface of the cancer. We have in many places stated the danger of using arsenic to an open sore.

QUAKER'S, OR LANCASTER BLACK DROP. *See* BLACK DROP, page 419.

REFINED LIQUORICE. This article, which is sold in the form of cylinders, is made by gently evaporating a solution of the pure extract of liquorice with half its weight of gum arabic, rolling the mass and cutting it into lengths, and then polishing, by rolling them together in a box. Many impurities, however, are fraudulently introduced into this article, such even as glue, &c. (DR. PARIS.)

RIGA BALSAM, *Beaume de Carpathes*, from the shoots of the *Pinus Cimbra*, previously bruised, and macerated for a month in water.

ROCHE'S EMBROCATION FOR THE HOOPING-COUGH. Olive-oil, mixed with about half its quantity of the oils of cloves and amber. Such external applications may be of service in hooping-cough, on the same principles as blisters or other counter-irritations.

RYMER'S CORDIAL TINCTURE is an infusion of capsicum, camphor, cardamom seeds, rhubarb, aloes, and castor in proof spirit, with a very small quantity of sulphuric acid.

SENNA, PREPARED ESSENCE OF. This is a concentrated infusion of senna in combination with an alkali.

SINGLETON'S EYE SALVE. *See* GOLDEN OINTMENT, page 608.

SMELLOME'S EYE SALVE consists of half a drachm of verdegris finely powdered and rubbed with oil, and then mixed with an ounce of yellow basilicon.

SOLOMON'S ANTI-IMPETIGINES. A solution of corrosive sublimate.

SOLOMON'S BALM OF GILEAD. An aromatic tincture, of which cardamoms form a leading ingredient, made with brandy. Some practitioners have asserted that cantharides enter into its composition. When we consider the very general propensity to dram-drinking, and how easily it is fostered by the pretence of taking cordial and nervous medicines, we shall not wonder at the celebrity of the far-famed Liverpool Balm of Gilead.

SPEEDIMAN'S PILLS. Aloes, myrrh, rhubarb, extract of chamomile, and some essential oil of chamomile.

SPILSBURY'S ANTISCORBUTIC DROPS are said to consist of corrosive sublimate, prepared sulphuret of antimony, gentian root and orange peel, equal parts; shavings of red saunders, made with proof spirit into a tincture, which is to be digested and strained.

SQUIRE'S ELIXIR. Opium, camphor, serpentaria, sub-carbonate of potash, anise and fennel seeds made into a tincture, and coloured with cochineal.

STOREY'S WORM CAKES. Calomel and jalap made into cakes, and coloured with cinnabar. *See* page 587.

STROUGHTON'S ELIXIR is a tincture of gentian, with the addition of serpentaria, orange peel, cardamoms, and some other aromatics.

STRUVE'S LOTION FOR HOOPING-COUGH. This once famed nostrum consisted of a drachm of tartarized antimony, dissolved in two ounces of water, to which was added an ounce of the tincture of cantharides.

SULPHUR LOZENGES. Sublimed sulphur one part, sugar eight parts, mucilage of gum tragacanth as much as requisite to form lozenges; used in asthma and for piles.

TAYLOR'S RED BOTTLE, commonly called the Whitworth Doctor. British brandy coloured with cochineal, and flavoured with oil of origanum.

TAYLOR'S REMEDY FOR DEAFNESS. Garlic infused in oil of almonds, and coloured by alkanet root.

TOLU LOZENGES. Sugar eight ounces, cream of tartar one ounce, starch two drachms, tincture of the balsam of Tolu one fluid drachm, mucilage of gum tragacanth, q. sufficit.

VELNO'S VEGETABLE SYRUP. There has been a good deal of obscurity with respect to the genuine composition of this nostrum. Its active ingredient seems to be some preparation of mercury.

WADE'S DROPS, OR THE GENERAL'S BALSAM, is the compound tincture of benzoin.

WALKER'S and WESSEL'S JESUIT'S DROPS. This is nothing more than the Elixir Anti-venereum of Quincy, consisting of guaiacum, balsam of copaiba, and oil of sassafras, made into a tincture by spirit.

WARD'S ESSENCE FOR THE HEADACH. The name of Ward is one of the most famous in the annals of quackery. It has even found its way into poetry: "WARD *tried on puppies and the poor, his drop.*" Dr. Paris says he was originally a footman, and during his attendance upon his master on the Continent, obtained from the monks those receipts which afterwards became his nostrums. That for the headach is nothing more than the compound camphor liniment of the London Pharmacopœia. It is highly stimulating, and is composed of camphor two parts, liquor ammoniæ six, spirits of lavender sixteen parts.

WARD'S PASTE FOR FISTULA AND PILES. Dr. Paris having given the formula for this composition, the Committee of the College of Physicians of London directed the preparation to be introduced into the Pharmacopœia, at the suggestion of several eminent practitioners who have experienced its utility in certain cases of piles. It is called the confection of black pepper; and Dr. Paris says it is well adapted for the cure of that species of piles which probably attended the sedentary and luxurious habits of the monks. It is made as follows.—Take of black pepper and of elecampane root of each one pound, fennel seeds three pounds, honey and purified sugar, of each two pounds. Triturate the dry substances together into a very fine powder, then add the honey, and beat the whole into a uniform mass.

WARD'S WHITE DROPS. This once esteemed antiscorbutic was prepared by dissolving mercury in nitric acid, and adding a solution of carbonate of ammonia; or frequently it consisted of sublimate with carbonate of ammonia.

WARD'S RED DROP. A strong vinous solution of tartarized antimony.

WARD'S SWEATING POWDER. A combination of white hellebore, (veratrum album) and opium. It was used in the cure of gout.

WARNER'S CORDIAL. Rhubarb bruised one ounce, senna half an ounce, saffron one drachm, powdered liquorice four drachms, pounded raisins one pound, brandy three gallons; digest for a week and strain.

WHITEHEAD'S ESSENCE OF MUSTARD. *See* ESSENCE OF MUSTARD.

WILSON'S GOUT TINCTURE. *See* GOUT TINCTURE.

WORM CAKES. *See* STOREY'S WORM CAKES, page 610, and CHING'S LOZENGES, page 605.

No. III.

Table showing the degrees of heat on Fahrenheit's Thermometer, at which several natural and physiological phenomena take place.

BELOW ZERO, *or the temperature of equal parts of snow and salt.*

— 90 Greatest artificial cold produced.
— 55 Strongest nitric acid, (aquafortis), freezes.
— 50 Natural cold observed at Hudson's Bay.
— 46 Ether freezes.
— 39 Mercury freezes.
— 36 Sulphuric acid (vitriol) freezes.
— 23 Cold observed on the surface of the snow at Glasgow, 1780.
— 7 Brandy freezes.

ABOVE ZERO.

+ 16 Oil of turpentine freezes.
20 Strong wines freeze.
25 Human blood freezes.
28 Vinegar freezes.
32 Water freezes.
43 Phosphorus burns slowly. As the heat of the body is much above this, phosphorus cannot be touched without injury, and must be kept in cold water, the heat of the air being frequently above 43.
59 Vinous fermentation begins.
66 to 135 Animal putrefaction occurs.
76 to 80 Summer heat in Britain.
85 to 97 Temperatures for the warm bath.
96 to 98 The heat of the human body; the heat of birds is a little higher.
97 Lard melts.
98 Ether boils.
104 to 106 Feverish heat.
109 Heat observed in scarlet fever.
110¾ The heat at which tea and other warm drinks are taken.
114 The heat of water in which the feet may be bathed.
165 Albumen, or the white of egg, coagulates.
176 Alcohol boils.
212 Water boils.
304 Oil of turpentine boils.
600 Linseed oil boils. To extinguish burning oil, cold oil should be thrown upon it; but not water, as this is instantly converted into steam, and scatters the flaming oil about in all directions.

No. IV.

As the intoxicating qualities of wine and fermented liquors depend on the proportion of alcohol which they contain, it is a matter of considerable interest to compare different liquors together with respect to this point; and Mr. Brande of London has constructed a Table, showing the alcohol contained in a hundred parts of the different liquors which he has examined.

The relative strength of the different wines, &c. in common use, may be judged of from this Table; but it must always be remembered that what is commonly called the *strength* of wine, which is a direct product of *fermentation*, depends upon alcohol in chemical combination with its other ingredients; and that the effects of wine upon the constitution are very different from those of diluted spirits, such as brandy, rum, gin, and other similar products of *distillation*.

It may be useful to mention, that the proportion of spirit per cent. in the following Table, means the pure unmixed alcohol, not the ardent spirits which are commonly drank. By looking at the five last articles of the Table, it will be seen, that they contain somewhat more than half their measure of alcohol, or they are *above proof*. A mixture of equal bulks of alcohol and water is called *proof spirit*. Therefore, if a person drinks a bottle of port, (see Table, No. 4), he drinks more than a fourth of it as alcohol, or more than a half as proof spirit; or, every bottle of port contains of intoxicating liquor, such as is commonly used under the name of brandy, gin, or whisky, an English pint. The same is true of Madeira, (No 5,) and in an inferior degree of Sherry, (No. 7;) and even Currant Wine, (No. 6,) thought so harmless, contains forty per cent. or near one half, of proof spirit.

		Proportion of Spirit per cent. by measure.
1.	Lissa	26·47
	Ditto	24·35
	Average	25·41
2.	Raisin wine	26·40
	Ditto	25·77
	Ditto	23·20
	Average	25·12
3.	Marsala	26·03
	Ditto	25·05
	Average	25·09
4.	Port	25·83
	Ditto	24·29
	Ditto	23·71
	Ditto	23·39
	Ditto	22·30
	Ditto	21·40
	Ditto	19·00
	Average	22·96
5.	Madeira	24·42
	Ditto	23·93
	Ditto (Sercial)	21·40
	Ditto	19·24
	Average	22·27
6	Currant wine	20·55
7.	Sherry	19·81
	Ditto	19.83
	Ditto	18·79
	Ditto	18·25
	Average	19·17
8.	Teneriffe	19·79
9.	Colares	19·75
10.	Constantia, white	19·75
11.	Ditto, red	18.92
12.	Lisbon	18.94
13.	Malaga (1666)	18·94
14.	Bucellas	18·49
15.	Red Madeira	22·30
	Ditto	18·40
	Average	20·35
16.	Cape Muschat	18·25
17.	Cape Madeira	22·94
	Ditto	20·50
	Ditto	18·11
	Average	20·51
18.	Grape wine	18·11
19.	Calcavella	19·20
	Ditto	18·10
	Average	18·65

		Proportion of Spirit per cent. by measure.
20.	Vidonia	19·25
21.	Alba Flora	17·26
22.	Malaga	17·26
23.	White Hermitage	17·43
24.	Rousillon	19·00
	Ditto	17·26
	Average	18·13
25.	Claret	17.11
	Ditto	16·32
	Ditto	14·08
	Ditto	12·91
	Average	15·10
26.	Malmsey Madeira	16·40
27.	Lunel	15·52
28.	Sheraz	15·52
29.	Syracuse	15·28
30.	Sauterne	14·22
31.	Burgundy	16·60
	Ditto	15·22
	Ditto	14·53
	Ditto	11·95
	Average	14·57
32.	Hock	14·37
	Ditto	13·00
	Ditto (old in cask)	8·88
	Average	12·08
33.	Nice	14·63
34.	Barsac	13·86
35.	Tent	13·30
36.	Champagne (still)	13·80
	Ditto (sparkling)	12·80
	Ditto (red)	12·56
	Ditto (ditto)	11·30
	Average	12·61
37.	Red Hermitage	12·32
38.	Vin de Grave	13·94
	Ditto	12·80
	Average	13·37
39.	Frontignac	12·79
40.	Côte Rotie	12·32
41.	Gooseberry wine	11·84
42.	Orange wine,—average of six samples made by a London manufacturer	11·26
43.	Tokay	9·88
44.	Elder wine	8·79
45.	Cider, highest average	9·87
	Ditto, lowest ditto	5·21
46.	Perry, average of four samples	7·26
47.	Mead	7·32
48.	Ale (Burton)	8.88
	Ditto (Edinburgh)	6·20
	Ditto (Dorchester)	5·56
	Average	6·87
49.	Brown stout	6·80
50.	London porter (average)	4·20
51.	Ditto small beer (ditto)	1·28
52.	Brandy	53·39
53.	Rum	53·68
54.	Gin	51·60
55.	Scotch Whisky	54·32
56.	Irish ditto	53·90