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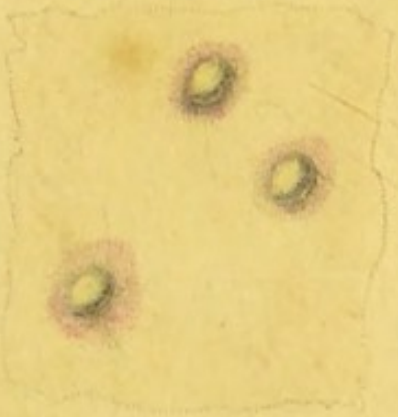
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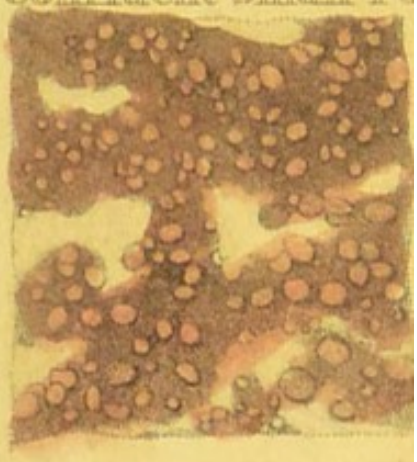
Small Pox 3d Day



Small Pox 5th Day



Confluent Small Po



Simple Scarlet Fever

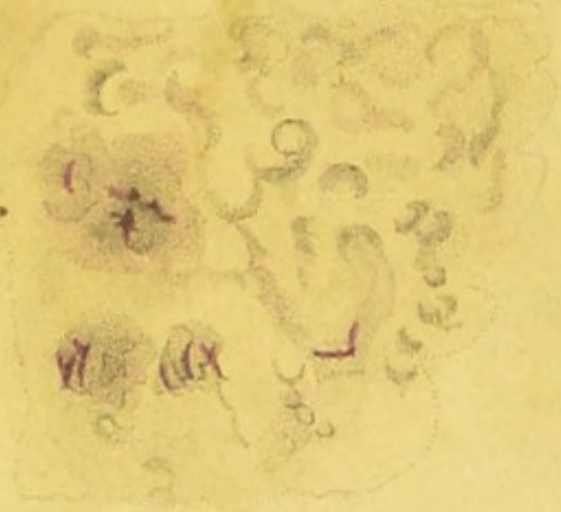


Malignant Scarlet Fever

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Measles 5th Day



Petechiae

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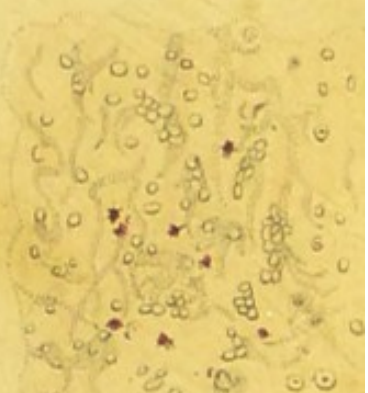
Miliary Fever



Rank Itch



Watery Itch



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DOMESTIC MEDICINE:

OR,

A TREATISE

ON THE

PREVENTION AND CURE

OF

DISEASES,

BY REGIMEN AND SIMPLE MEDICINES.

BY WILLIAM BUCHAN, M. D.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

A NEW EDITION,

EDITED, AND BROUGHT DOWN TO THE PRESENT STATE OF MEDICAL SCIENCE, BY A FELLOW OF THE ROYAL COLLEGE OF SURGEONS, EDINBURGH.

EDINBURGH:

PRINTED FOR THOMAS NELSON.

MDCCCXXXIX.

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TABLE OF APOTHECARIES WEIGHTS.

			Marked
20 grains are equal to	1 scruple,	- - -	scr.
3 scruples ——	1 drachm,	- - - -	dr.
8 drachms ——	1 ounce,	- - -	oz.
12 ounces ——	1 pound,	- - - -	lb.

60 minims, or drops, are equal to one drachm fluid measure.

TABLE OF DOSES OF MEDICINE FOR ADULTS.

ABSORBENTS.—(To correct acidity, heart-burn, &c.)
Carbonate of Potass, }
————Soda, } 10 grs. to 1 scr.
Magnesia, - do. do.
Prepared Chalk, 3 grs. to 10 grs.
Lime Water, ½ a lb. to 1 lb. daily.

ANODYNES.—(To allay pain.)
Opium, 1 gr. to 2 grs.
Laudanum, 25 drops to 60 drops.
Solution of Muriate of Morphia, 25 drops to 60 drops.
Hyosciamus, Extract, 3 grs. to 10 grs.
———— Tincture, 20 drops to ½ a dr.

ANTISPASMODICS.—In Epilepsy, Hysteria, and Nervous Affections in general.
Castor, in doses of 10 grs.
Tincture of, half a dram to 1 dr.
Valerian, 1 scr. to 2 scr.
Tincture of, 1 dr. to 2 dr.
Assafœtida. 10 grs.
Tincture of, half a dr. to 1 dr.
Camphor, 1 gr. to 5 grs.
Emulsion of, half an oz. to 1 oz.
Musk, 5 grs. to 10 grs.
Tincture of, 1 dr. to 2 drs.

ASTRINGENTS.—(To correct looseness, &c.)
Prepared Chalk, 3 grs. to 10 grs.
Do. with Laudanum, or Dover's powder, 4 grs. to 10 grs.
Do. with Tincture of Rhubarb, half a dr. to 1 dr.
Tincture of Kino, do. do.
———— Catechu, do. do.
Electuary of Catechu, 1 scr. to 1 dr.

DIAPHORETICS.—(To produce perspiration.) During their operation, the patient must be kept warm, and supplied with warm drinks; and by frequently repeating the dose, perspiration may be kept up.
Antimonial powder, 3 grs. to 4 grs.
———— Wine, 15 drops to 20 drops. May be combined with Laudanum.
Dover's powder, 8 grs. to 15 grs.
Camphor, 3 or 4 grs. with half a gr. of opium.

DIURETICS.—(To increase the Urine.) Must be given every 3 or 4 hours, and the patient kept cool, and allowed to drink freely.

Squill Powder, 1 gr. to 2 grs.
——— Tincture, 10 drops to 20 drops.
Sweet Spirits of Nitre, 1 dr. to 2 drs.
Nitre, (Nitrate of Potass) 5 grs. to 20 grs.
Acetate of Potass, 20 grs. to 1 dr.
Tincture of Iron, 10 drops to 20 drops.

EMETICS.—(To produce vomiting.)

Ipecacuan Powder, 20 grs. to 25 grs.
——— Wine, 2 drs. to 4 drs.
Tartar Emetic, 2 grs. to 4 grs.
Antimonial Wine, 1 dr. to 2 drs.
Sulphate of Zinc, ½ a dram.
Mustard, 1 dr. to 2 drs.

EXPECTORANTS.—(For Coughs, to be given in small and frequent doses; may be combined with Anodynes.)

Squill powder, 1 gr.
——— vinegar, ½ a dr. to 1 dr.
——— syrup, 1 dr. to 2 drs.
Ipecacuan Powder, 1 gr.
——— Wine, 10 drops to ½ a dram.
Paregoric, (English,) 1 dr. to ½ an oz.
——— (Scotch,) 10 drops to 1 dram.

LAXATIVES and PURGATIVES.

Calomel, 2 grs. to 6 grs.
Rhubarb powder, 10 grs. to 25 grs.
Magnesia, 10 grs. to ½ a dr.
Jalap, 10 grs. to 1 scr.
——— Compound powder of, ½ a dr. to 1 dr.
Scammony, 3 grs. to 8 grs.
Aloes, 2 grs. to 5 grs.
Senna, 1 scr. to 1 dr.
Sulphate of Magnesia (Epsom salts,) } 1 oz.
Rochelle salts and Glauber salts, }
Castor Oil, ½ an oz. to 1 oz.

TONICS.—Must be given twice or thrice daily for some length of time.

Peruvian Bark, 10 grs. to 1 dr.
Tincture of do. 1 dr. to 2 dr.
Sulphate of Quinine, ½ a gr. to 2 grs.
Gentian, Powder of, 10 grs. to 20 grs.
——— Tincture of, 1 dr. to 2 drs.
Columba, Powder of, 10 grs. to 1 dr.
——— Tincture of, 1 dr. to 2 drs.
Infusion of Quassia, } 1 dr. to ½ an oz.
½ a dr. in 8 oz. of water, }
Carbonate (rust) of Iron, 1 gr. to 1 scr.
Sulphate of Iron, 1 gr. to 5 grs.

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PREFACE.

When I first signified my intention of publishing the following sheets, I was told by my friends it would draw on me the resentment of the whole Faculty. As I never could entertain such an unfavourable idea, I was resolved to make the experiment, which indeed came out pretty much as might have been expected. Many whose learning and liberality of sentiments do honour to medicine, received the book in a manner which at once shewed their indulgence, and the falsity of the opinion *that every physician wishes to conceal his art;* while the more selfish and narrow-minded, generally the most numerous in every profession, have not failed to persecute both the book and its Author.

The reception, however, which this Work has met with from the Public, merits my most grateful acknowledgements. As the best way of expressing these, I have endeavoured to render it more generally useful, by enlarging the *prophylaxis*, or that part which treats of preventing diseases; and by adding many articles which had been entirely omitted in the former impressions. It is needless to enumerate these additions; I shall only say, that I hope they will be found real improvements.

The observations relative to Nursing and the Management of Children, were chiefly suggested by an extensive practice among infants, in a large branch of the Foundling Hospital, where I had an opportunity, not only of treating the diseases incident to childhood, but likewise of trying

different plans of nursing, and observing their effects. Whenever I had it in my power to place the children under the care of proper nurses, to instruct these nurses in their duty, and to be satisfied that they performed it, very few of them died: but when from distance of place, and other unavoidable circumstances, the children were left to the sole care of mercenary nurses, without any person to instruct or superintend them, scarce any of them lived.

This was so apparent, as with me to amount to a proof of the following melancholy fact: *That almost one half of the human species perish in infancy, by improper management or neglect.* This reflection has made me often wish to be the happy instrument of alleviating the miseries of those suffering innocents, or of rescuing them from an untimely grave. No one, who has not had an opportunity of observing them, can imagine what absurd and ridiculous practices still prevail in the nursing and management of infants, and what numbers of lives are by that means lost to society. As these practices are chiefly owing to ignorance, it is to be hoped, that when nurses are better informed, their conduct will be more proper.

The application of medicine to the various occupations of life, has been in general the result of observation. An extensive practice for several years, in one of the largest manufacturing towns in England, afforded me sufficient opportunities of observing the injuries which those useful people sustain from their particular employments, and likewise of trying various methods of obviating such injuries. The success which attended these trials was sufficient to encourage this attempt, which I hope will be of use to those who are under the necessity of earning their bread by such employments as are unfavourable to health.

I do not mean to intimidate men, far less to insinuate that even those arts, the practice of which is attended with

some degree of danger, should not be carried on; but to guard the less cautious and unwary against those dangers which they have in their power to avoid, and which they often, through mere ignorance, incur. As every occupation in life disposes those who follow it to particular diseases more than to others, it is certainly of importance to know these, in order that people may be upon their guard against them. It is always better to be warned of the approach of an enemy, than to be surprised by him, especially where there is a possibility of avoiding the danger.

The observations concerning Diet, Air, Exercise, &c. are of a more general nature, and have not escaped the attention of physicians in any age. They are subjects of too great importance, however, to be passed over in an attempt of this kind, and can never be sufficiently recommended. The man who pays a proper attention to these will seldom need the physician: and he who does not will seldom enjoy health, let him employ as many physicians as he pleases.

Though we have endeavoured to point out the cause of diseases, and to put people upon their guard against them, yet it must be acknowledged that they are often of such a nature as to admit of being removed only by the diligence and activity of the public magistrate. We are sorry, indeed, to observe that the power of the magistrate is seldom exerted in this country for the preservation of health. The importance of a proper medical police is either not understood, or little regarded. Many things highly injurious to the public health are daily practised with impunity, while others, absolutely necessary for its preservation, are entirely neglected.

Some of the public means of preserving health are mentioned in the general prophylaxis, as the inspection of provisions, widening the streets of great towns, keeping them

clean, supplying the inhabitants with wholesome water, &c.; but they are passed over in a very cursory manner. A proper attention to these would have swelled this volume to too large a size; I have therefore reserved them for the subject of a future publication.

In the treatment of diseases, I have been peculiarly attentive to regimen. The generality of people lay too much stress upon Medicine, and trust too little to their own endeavours. It is always in the power of the patient, or of those about him, to do as much towards his recovery as can be effected by the physician. By not attending to this, the designs of Medicine are often frustrated; and the patient, by pursuing a wrong plan of regimen, not only defeats the Doctor's endeavours, but renders them dangerous. I have often known patients killed by an error in regimen, when he prescribes a medicine. I wish it were so, both for the honour of the Faculty and the safety of their patients: but physicians, as well as other people, are too little attentive to this matter.

Though many reckon it doubtful whether physic is more beneficial or hurtful to mankind, yet all allow the necessity and importance of a proper regimen in diseases. Indeed the very appetites of the sick prove its propriety. No man in his senses ever imagined that a person in a fever, for example, could eat, drink, or conduct himself in the same manner as one in perfect health. This part of medicine, therefore, is evidently founded in Nature, and is every way consistent with reason and common sense. Had men been more attentive to it, and less solicitous in hunting after secret remedies, Medicine had never become an object of ridicule.

This seems to have been the first idea of Medicine. The ancient physicians acted chiefly in the capacity of nurses. They went very little beyond aliment in their prescriptions;

and even this they generally administered themselves, attending the sick for that purpose through the whole course of the disease; which gave them an opportunity, not only of marking the changes of diseases with great accuracy, but likewise of observing the effects of their different applications, and adapting them to the symptoms.

The learned Dr Arbuthnot asserts, that by a proper attention to those things which are almost within the reach of every body, more good and less mischief will be done in acute diseases, than by medicines improperly and unseasonably administered; and that great cures may be effected in chronical distempers, by a proper regimen of the diet only. So entirely do the Doctor's sentiments and mine agree, that I would advise every person, ignorant of physic, to confine his practice solely to diet, and the other parts of regimen; by which means he may often do much good, and can seldom do any hurt.

This seems also to have been the opinion of the ingenious Dr Huxham, who observes, that we often seek from art what all-bountiful Nature most readily, and as effectually, offers us, had we diligence and sagacity enough to observe and make use of them; that the *dietetic* part of Medicine is not so much studied as it ought to be; and that though less pompous, yet it is the most natural method of curing diseases.

To render the book more generally useful, however, as well as more acceptable to the intelligent part of mankind, I have in most diseases, besides regimen, recommended some of the most simple and approved forms of medicine, and added such cautions and directions as seemed necessary for their safe administration. It would no doubt have been more acceptable to many, had it abounded with pompous prescriptions, and promised great cures in consequence of their use; but this was not my plan: I think the ad-

ministration of medicines always doubtful, and often dangerous, and would much rather teach men how to avoid the necessity of using them, than how they should be used.

Several medicines, and those of considerable efficacy, may be administered with great freedom and safety. Physicians generally trifle a long time with medicines before they learn their proper use. Many peasants at present know better how to use some of the most important articles in the *materia medica*, than physicians did a century ago; and doubtless the same observation will hold with regard to others some time hence. Wherever I was convinced that medicine might be used with safety, or where the cure depended chiefly upon it, I have taken care to recommend it; but where it was either highly dangerous, or not very necessary, it is omitted.

I have not troubled the reader with an useless parade of quotations from different authors, but have in general adopted their observations where my own were either defective, or totally wanting. Those to whom I am most obliged are, Ramazini, Arbuthnot, and Tissot; the last of which, in his *Avis au Peuple*, comes the nearest to my views of any author which I have seen. Had the Doctor's plan been as complete as the execution is masterly, we should have had no occasion for any new treatise of this kind soon; but by confining himself to the acute diseases, he has, in my opinion, omitted the most useful part of his subject. People in acute diseases, may sometimes be their own physicians; but in the chronic, the cure must ever depend chiefly upon the patient's own endeavours. The Doctor has also passed over the *Prophylaxis*, or preventive part of Medicine, very slightly, though it is certainly of the greatest importance in such a work. He had no doubt his reasons for so doing, and I am so far from finding fault with him, that I think

his performance does great honour both to his head and to his heart.

Several other foreign physicians of eminence have written on nearly the same plan with Tissot, as the Baron Van Swieton, physician to their Imperial Majesties, M. Rosen, first physician of the kingdom of Sweden, &c.; but these gentlemen's productions have never come to my hand. I cannot help wishing, however, that some of our distinguished countrymen would follow their example. There still remains much to be done on this subject, and it does not appear to me how any man could better employ his time, or talents, than in eradicating hurtful prejudices, and diffusing useful knowledge among the people.

I know some of the Faculty disapprove of every attempt of this nature, imagining that it must totally destroy their influence. But this notion appears to me to be as absurd as it is illiberal. People in distress will always apply for relief to men of superior abilities, when they have it in their power; and they will do this with far greater confidence and readiness, when they believe that Medicine is a rational science, than when they take it to be only a matter of mere conjecture.

Though I have endeavoured to render this Treatise plain and useful, yet I found it impossible to avoid some terms of art; but those are in general either explained, or are such as most people understand. In short, I have endeavoured to conform my style to the capacities of mankind in general; and, if my readers do not flatter either themselves or me, with some degree of success. On a medical subject, this is not so easy a matter as some may imagine. To make a shew of learning is easier than to write plain sense, especially in a science which has been kept at such a distance from common observation. It would, however, be no difficult matter to prove, that every thing valuable in the

practical part of Medicine is within the reach of common abilities.

It would be ungenerous not to express my warmest acknowledgments to those gentlemen who have endeavoured to extend the usefulness of this performance, by translating it into the language of their respective countries. Most of them have not only given elegant translations of the book, but have also enriched it with many useful observations; by which it is rendered more complete, and better adapted to the climate and constitutions of their countrymen. To the learned Dr Duplanil of Paris, physician to the Count d'Artois, I lie under particular obligations; as this gentleman has not only considerably enlarged my treatise, but by his very ingenious and useful notes, has rendered it so popular on the Continent, as to occasion it being translated into all the languages of modern Europe.

I have only to add, that the book has not more exceeded my expectations in its success, than in the effects it has produced. Some of the most pernicious practices, with regard to the treatment of the sick, have already given place to a more rational conduct; and many of the most hurtful prejudices, which seemed to be quite insurmountable, have in a great measure yielded to better information. Of this a stronger instance cannot be given than the inoculation of the small-pox. Few mothers, some years ago, would submit to have their children inoculated even by the hand of a physician; yet nothing is more certain, than that of late many of them have performed this operation with their own hands; and as their success has been equal to that of the most dignified inoculators, there is little reason to doubt that the practice will become general. Whenever this shall be the case, more lives will be saved by inoculation alone than are at present by all the endeavours of the Faculty.

INTRODUCTION.

The improvements in Medicine, since the revival of learning, have by no means kept pace with those of the other arts. The reason is obvious. Medicine has been studied by few, except those who intended to live by it as a trade. Such, either from a mistaken zeal for the honour of Medicine, or to raise their own importance, have endeavoured to disguise and conceal the art. Medical authors have generally written in a foreign language; and those who were unequal to this task, have even valued themselves upon couching, at least, their prescriptions, in terms and characters unintelligible to the rest of mankind.

The contentions of the clergy, which happened soon after the restoration of learning, engaged the attention of mankind, and paved the way for that freedom of thought and inquiry, which has since prevailed in most parts of Europe with regard to religious matters. Every man took a side in those bloody disputes; and every gentleman, that he might distinguish himself on one side or other, was instructed in Divinity. This taught people to think and reason for themselves in matters of religion, and at last totally destroyed that complete and absolute dominion which the clergy had obtained over the minds of men.

The study of Law has likewise, in most civilized nations, been justly deemed a necessary part of the education of a gentleman. Every gentleman ought certainly to know at least the laws of his own country; and if he were also acquainted with those of others, it might be more than barely an ornament to him.

The different branches of Philosophy have also of late been very universally studied by all who pretended to a liberal education. The advantages of this are manifest. It frees the mind from prejudice and superstition; fits it for the investigation of truth; induces habits of reasoning

and judging properly; opens an inexhaustible source of entertainment; paves the way to the improvement of arts and agriculture; and qualifies men for acting with propriety in the most important stations of life.

Natural History is likewise become an object of general attention; and it well deserves to be so. It leads to discoveries of the greatest importance. Indeed agriculture, the most useful of all arts, is only a branch of Natural History, and can never arrive at a high degree of improvement where the study of that science is neglected.

Medicine, however, has not, as far as I know, in any country, been reckoned a necessary part of the education of a gentleman. But surely no sufficient reason can be assigned for this omission. No science lays open a more extensive field of useful knowledge, or affords a more ample entertainment to an inquisitive mind. Anatomy, Botany, Chemistry, and the *Materia Medica*, are all branches of Natural History, and are fraught with such amusement and utility, that the man who entirely neglects them has but a sorry claim either to taste or learning. If a gentleman has a turn for observation, says an excellent and sensible writer,* surely the natural history of his own species is a more interesting subject, and presents a more ample field for the exertion of genius, than the natural history of spiders and cockle-shells.

We do not mean that every man should become a physician. This would be an attempt as ridiculous as it is impossible. All we plead for is, that men of sense and learning should be so far acquainted with the general principles of Medicine, as to be in a condition to derive from it some of those advantages with which it is fraught; and at the same time to guard themselves against the destructive influences of Ignorance, Superstition, and Quackery.

As matters stand at present, it is easier to cheat a man out of his life than of a shilling, and almost impossible either to detect or punish the offender. Notwithstanding this, people still shut their eyes, and take every thing upon trust that is administered by any Pretender to Medicine, without daring to ask him a reason for any part of his conduct. Implicit faith, every where else the object of ridi-

* Observations on the Duties and Offices of a Physician.

cule, is still sacred here. Many of the Faculty are no doubt worthy of all the confidence that can be reposed in them; but as this can never be the character of every individual in any profession, it would certainly be for the safety, as well as the honour of mankind, to have some check upon the conduct of those to whom they entrust so valuable a treasure as health.

The veil of mystery, which still hangs over Medicine, renders it not only a conjectural, but even a suspicious art. This has been long removed from the other sciences, which induces many to believe that Medicine is a mere trick, and that it will not bear a fair and candid examination. Medicine, however, needs only to be better known, in order to secure the general esteem of mankind. Its precepts are such as every wise man would choose to observe, and it forbids nothing but what is incompatible with true happiness.

Disguising Medicine not only retards its improvement as a science, but exposes the profession to ridicule, and is injurious to the true interests of society. An art founded on observation never can arrive at any high degree of improvement, while it is confined to a few who make a trade of it. The united observations of all the ingenious and sensible part of mankind, would do more in a few years towards the improvement of Medicine, than those of the Faculty alone in a great many. Any man can tell when a medicine gives him ease, as well as a physician; and if he only knows the name and dose of the medicine, and the name of the disease, it is sufficient to perpetuate the fact. Yet the man who adds one single fact to the stock of medical observations, does more real service to the art than he who writes a volume in support of some favourable hypothesis.

Very few of the valuable discoveries in Medicine have been made by physicians. They have in general either been the effect of chance or of necessity, and have been usually opposed by the Faculty, till every one else was convinced of their importance. An implicit faith in the opinions of teachers, an attachment to systems and established forms, and the dread of reflections, will always operate upon those who follow Medicine as a trade. Few improvements are to be expected from a man who might

ruin his character and family by even the smallest deviation from an established rule.

If men of letters, says the author of the performance quoted above, were to claim their right of inquiry into a matter that so nearly concerns them, the good effects on Medicine would soon appear. Such men would have no separate interest from that of the art. They would detect and expose assuming Ignorance under the mask of Gravity and Importance, and would be the judges and patrons of modest merit. Not having their understandings perverted in their youth by false theories, unawed by authority, and unbiassed by interest, they would canvass with freedom the most universally received principles in Medicine, and expose the uncertainty of many of those doctrines, of which a physician dares not so much as seem to doubt.

No argument, continues he, can be brought against laying open Medicine, which does not apply with equal, if not greater force, to religion; yet experience has shewn, that since the laity have asserted their right of inquiry into these subjects, Theology, considered as a science, has been improved, the interests of real religion have been promoted, and the clergy have become a more learned, a more useful, and a more respectable body of men, than they ever were in the days of their greatest power and splendour.

Had other medical writers been as honest as this gentleman, the art had been upon a very different footing at this day. Most of them extol the merit of those men who brought Philosophy out of the schools, and subjected it to the rules of common sense. But they never consider that Medicine, at present, is in nearly the same situation as Philosophy was at that time, and that it might be as much improved by being treated in the same manner. Indeed, no science can either be rendered rational or useful, without being submitted to the common sense and reason of mankind. These alone stamp a value upon science; and what will not bear the test of these ought to be rejected.

I know it will be said, that diffusing Medical knowledge among the people might induce them to tamper with Medicine, and to trust to their own skill instead of calling a physician. The reverse of this, however, is true. Persons who have most knowledge in these matters, are commonly most ready both to ask and to follow advice, when it is ne-

cessary. The ignorant are always most apt to tamper with Medicine, and have the least confidence in physicians. Instances of this are daily to be met with among the ignorant peasants, who, while they absolutely refuse to take a medicine which has been prescribed by a physician, will swallow with greediness any thing that is recommended to them by their credulous neighbours. Where men will act even without knowledge, it is certainly more rational to afford them all the light we can, than to leave them entirely in the dark.

It may be also alleged, that laying Medicine more open to mankind would lessen their faith in it. This would indeed be the case with regard to some; but it would have a quite contrary effect upon others. I know many people who have the utmost dread and horror of every thing prescribed by a physician, but who will nevertheless very readily take a medicine which they know, and whose qualities they are in some measure acquainted with. Hence it is evident, that the dread arises from the doctor, not from the drug. Nothing ever can, or will inspire mankind with an absolute confidence in physicians, but an open, frank, and undisguised behaviour. While the least shadow of mystery remains in the conduct of the Faculty, doubts, jealousies, and suspicions, will arise in the minds of men.

No doubt cases will sometimes occur, where a prudent physician may find it expedient to disguise a medicine. The whims and humours of men must be regarded by those who mean to do them service; but this can never affect the general argument in favour of candour and openness. A man might as well allege, because there are knaves and fools in the world, that he ought to take every one he meets for such, and to treat him accordingly. A sensible physician will always know where disguise is necessary; but it ought never to appear on the face of his general conduct.

The appearance of mystery in the conduct of physicians not only renders their art suspicious, but lays the foundations of Quackery, which is the disgrace of Medicine. No two characters can be more different than that of the honest physician and the quack; yet they have generally been very much confounded. The line between them is not sufficiently apparent; at least it is too fine for the general eye. Few persons are able to distinguish sufficiently between the

conduct of that man who administers a secret medicine, and him who writes a prescription in mystical characters and an unknown tongue. Thus the conduct of the honest physician, which needs no disguise, gives a sanction to that of the villain, whose sole consequence depends upon secrecy.

No laws will ever be able to prevent quackery, while the people believe that the quack is as honest a man, and as well qualified, as the physician. A very small degree of medical knowledge, however, would be sufficient to break the spell; and nothing else can effectually undeceive them. It is the ignorance and credulity of the multitude, with regard to medicine, which renders them such an easy prey to every one who has the hardiness to attack them on this quarter. Nor can the evil be remedied by any other means but by making them wiser.

The most effectual way to destroy quackery in any art or science, is to diffuse the knowledge of it among mankind. Did physicians write their prescriptions in the common language of the country, and explain their intentions to the patient, as far as he could understand them, it would enable him to know when the medicine had the desired effect; would inspire him with absolute confidence in the physician; and would make him dread and detest every man who pretended to cram a secret medicine down his throat.

Men in the different states of society, have very different views of the same object. Some time ago it was the practice of this country for every person to say his prayers in Latin, whether he knew any thing of that language or not. This conduct, though sacred in the eyes of our ancestors, appears ridiculous enough to us; and doubtless some parts of ours will seem as strange to posterity. Among these we may reckon the present mode of medical prescription, which, we venture to affirm, will sometime hence appear to have been completely ridiculous, and a very high burlesque upon the common sense of mankind.

But this practice is not only ridiculous, it is likewise dangerous. However capable physicians may be of writing Latin, I am certain apothecaries are not always in a condition to read it, and that dangerous mistakes, in consequence of this, often happen. But suppose the apothecary ever so able to read the physician's prescription, he is

generally otherwise employed, and the business of making up prescriptions is left entirely to the apprentice. By this means the greatest man in the kingdom, even when he employs a first-rate physician, in reality trusts his life in the hands of an idle boy, who has not only the chance of being very ignorant, but likewise giddy and careless. Mistakes will sometimes happen in spite of the greatest care; but, where human lives are concerned, all possible methods ought certainly to be taken to prevent them. For this reason, the prescriptions of physicians, instead of being couched in mystical characters, and a foreign language, ought, in my humble opinion, to be conceived in the most plain and obvious terms imaginable.

Diffusing medical knowledge among the people would not only tend to improve the art, and to banish quackery, but likewise to render Medicine more universally useful, by extending its benefits to society. However long Medicine may have been known as a science, we will venture to say, that many of its most important purposes to society have either been overlooked, or very little attended to. The cure of diseases is doubtless a matter of great importance; but the preservation of health is of still greater. This is the concern of every man, and surely what relates to it ought to be rendered as plain and obvious to all as possible. It is not to be supposed, that men can be sufficiently upon their guard against diseases, who are totally ignorant of their causes. Neither can the legislature, in whose power it is to do much more for preserving the public health than can ever be done by the Faculty, exert that power with propriety, and to the greatest advantage, without some degree of medical knowledge.

Men of every occupation and condition in life, might avail themselves of a degree of medical knowledge; as it would teach them to avoid the dangers peculiar to their respective stations; which is always easier than to remove their effects. Medical knowledge, instead of being a check upon the enjoyments of life, only teaches men how to make the most of them. It has indeed been said, *that to live medically, is to live miserably:* but it might with equal propriety be said, that to live rationally is to live miserably. If physicians obtrude their own ridiculous whims upon mankind, or lay down rules inconsistent with reason or

common sense, no doubt they will be despised. But this is not the fault of Medicine. It proposes no rules that I know, but such as are perfectly consistent with the true enjoyment of life, and every way conducive to the real happiness of mankind.

We are sorry indeed to observe, that Medicine has hitherto hardly been considered as a popular science, but as a branch of knowledge solely confined to a particular set of men, while all the rest have been taught not only to neglect, but even to dread and despise it. It will however appear, upon a more strict examination, that no science better deserves their attention, or is more capable of being rendered generally useful.

People are told, that if they dip the least into medical knowledge, it will render them fanciful, and make them believe they have every disease of which they read. This I am satisfied will seldom be the case with sensible people; and suppose it were, they must soon be undeceived. A short time will shew them their error, and a little more reading will infallibly correct it. A single instance will shew the absurdity of this notion. A sensible lady, rather than read a medical performance, which would instruct her in the management of her children, must leave them entirely to the care and conduct of the most ignorant, credulous, and superstitious of the human species.

No part of Medicine is of more general importance, than that which relates to the nursing and management of children. Yet few parents pay a proper attention to it. They leave the sole care of their tender offspring, at the very time when care and attention are most necessary, to hirelings, who are either too careless to do their duty, or too ignorant to know it. We will venture to affirm, that more human lives are lost by the carelessness and inattention of parents and nurses, than are saved by the Faculty; and that the joint and well-conducted endeavours, both of private persons and the public, for the preservation of infant lives, would be of more advantage to society than the whole art of Medicine, upon its present footing.

The benefits of Medicine, as a trade, will ever be confined to those who are able to pay for them; and of course, the far greater part of mankind will be everywhere deprived of them. Physicians, like other people, must live

by their employment, and the poor must either want advice altogether, or take up with that which is worse than none. There are not, however, any where wanting well-disposed people, of better sense, who are willing to supply the defect of medical advice to the poor, did not their fear of doing ill often suppress their inclination to do good. Such people are often deterred from the most noble and praise-worthy actions, by the foolish alarms sounded in their ears by a set of men, who, to raise their own importance, magnify the difficulties of doing good, find fault with what is truly commendable, and fleer at every attempt to relieve the sick which is not conducted by the precise rules of Medicine. These gentlemen must, however, excuse me from saying, that I have often known such well-disposed persons do much good; and that their practice, which is generally the result of good sense, and observation, assisted by a little medical reading, is frequently more rational than that of the ignorant retainer to physic, who despises both reason and observation, *that he may go wrong by rule;* and who, while he is dosing his patient with medicines, often neglects other things of far greater importance.

Many things are necessary for the sick besides medicine. Nor is the person who takes care to procure these for them, of less importance than a physician. The poor oftener perish in diseases for want of proper nursing than of medicine. They are frequently in want of even the necessaries of life, and still more so of what is proper for a sick-bed. No one can imagine, who has not been a witness of these situations, how much good a well-disposed person may do, by only taking care to have such wants supplied. There certainly cannot be a more necessary, a more noble, or a more godlike action, than to administer to the wants of our fellow-creatures in distress. While virtue or religion are known among mankind, this conduct will be approved: and while Heaven is just, it must be rewarded!

Persons who do not choose to administer medicine to the sick, may nevertheless direct their regimen. An eminent medical author has said, That by diet alone all the intentions of Medicine may be answered.* No doubt a great

* Arbuthnot.

many of them may; but there are other things besides diet, which ought by no means to be neglected. Many hurtful and destructive prejudices, with regard to the treatment of the sick, still prevail among the people, which persons of better sense and learning alone can eradicate. To guard the poor against the influences of these prejudices, and to instil into their minds some just ideas of the importance of proper food, fresh air, cleanliness, and other pieces of regimen necessary in diseases, would be a work of great merit, and productive of many happy consequences. A proper regimen, in most diseases, is at least equal to medicine, and in many of them it is greatly superior.

To assist the well-meant endeavours of the humane and benevolent in relieving distress; to eradicate dangerous and hurtful prejudices; to guard the ignorant and credulous against the frauds and impositions of quacks and impostors; and to shew men what is in their own power, both with regard to the prevention and cure of diseases,—are certainly objects worthy of the physician's attention. These were the leading views in composing and publishing the following sheets. They were suggested by an attention to the conduct of mankind, with regard to Medicine, in the course of a pretty long practice in different parts of this island, during which the author has often had occasion to wish that his patients, or those about them, had been possessed of some such plain directory for regulating their conduct. How far he has succeeded in his endeavours to supply this deficiency, must be left for others to determine; but if they be found to contribute in any measure towards alleviating the calamities of mankind, he will think his labour very well bestowed.

PART I.

OF

THE GENERAL CAUSES OF DISEASES.

CHAP. I.

OF CHILDREN.

The better to trace diseases from their original causes, we shall take a view of the common treatment of mankind in the state of infancy. In this period of our lives the foundations of a good or bad constitution are generally laid; it is therefore of importance, that parents be well acquainted with the various causes which may injure the health of their offspring.

It appears from the annual registers of the dead, that almost one half of the children born in Great Britain die under twelve years of age. To many, indeed, this may appear a natural evil; but on due examination it will be found to be one of our own creating. Were the death of infants a natural evil, other animals would be as liable to die young as man; but this we find is by no means the case.

It may seem strange that man, notwithstanding his superior reason, should fall so far short of other animals in the management of his young: but our surprise will soon cease, if we consider that brutes, guided by instinct, never err in this respect; while man, trusting solely to art, is seldom right. Were a catalogue of those infants who perish annually by art alone exhibited to public view, it would astonish most people.

If parents are above taking care of their children, others must be employed for that purpose; these will always en-

deavour to recommend themselves by the appearance of extraordinary skill and address. By this means such a number of unnecessary and destructive articles have been introduced into the diet, clothing, &c. of infants, that it is no wonder so many of them perish.

Nothing can be more preposterous than a mother who thinks it below her to take care of her own child, or who is so ignorant as not to know what is proper to be done for it. If we search Nature throughout, we cannot find a parallel to this. Every other animal is the nurse of its own offspring, and they thrive accordingly. Were the brutes to bring up their young by proxy, they would share the same fate with those of the human species.

We mean not, however, to impose it as a task upon every mother to suckle her own child. This, whatever speculative writers may allege, is in some cases impracticable, and would inevitably prove destructive both to the mother and child. Women of delicate constitutions, subject to hysteric fits or other nervous affections, make very bad nurses ;* and these complaints are now so common, that it is rare to find a woman of fashion free from them : such women therefore, supposing them willing, are often unable to suckle their own children.

Almost every mother would be in a condition to give suck, did mankind live agreeably to Nature ; but whoever considers how far many mothers deviate from her dictates, will not be surprised to find some of them unable to perform that necessary office. Mothers who do not eat a sufficient quantity of solid food, nor enjoy the benefit of free air and exercise, can neither have wholesome juices themselves, nor afford proper nourishment to an infant. Hence children who are suckled by delicate women, either die young, or continue weak and sickly all their lives.

When we say that mothers are not always in a condition to suckle their own children, we would not be understood as discouraging that practice. Every mother who can, ought certainly to perform so tender and agreeable an office.† But

* I have known an hysteric woman kill her child, by being seized with a fit in the night.

† Many advantages would arise to society, as well as to individuals, from mothers suckling their own children. It would prevent the temptations which poor women are laid under of abandoning their children to suckle

suppose it to be out of her power, she may nevertheless be of great service to her child. The business of nursing is by no means confined to giving suck. To a woman who abounds with milk, this is the easiest part of it. Numberless other offices are necessary for a child, which the mother ought at least to see done.

A mother who abandons the fruit of her womb, as soon as it is born, to the sole care of an hireling, hardly deserves that name. A child, by being brought up under the mother's eye, not only secures her affection, but may reap all the advantages of a parent's care, though it be suckled by another. How can a mother be better employed than in superintending the nursery? This is at once the most delightful and important office; yet the most trivial business or insipid amusements are often preferred to it! A strong proof both of the bad taste and wrong education of modern females.

It is indeed to be regretted that more care is not bestowed in teaching the proper management of children to those whom Nature has designed for mothers. This, instead of being made the principal, is seldom considered as any part of female education. Is it any wonder, when females so educated come to be mothers, that they should be quite ignorant of the duties belonging to that character? However strange it may appear, it is certainly true, that many mothers, and those of fashion too, are as ignorant, when they have brought a child into the world, of what is to be done for it, as the infant itself. Indeed the most ignorant of the sex are generally reckoned most knowing in the business of nursing. Hence, sensible people become the dupes of ignorance and superstition: and the nursing of children, instead of being conducted by reason, is the result of whim and caprice.*

those of the rich for the sake of gain; by which means society loses many of its most useful members, and mothers become in some sense the murderers of their own offspring. I am sure I speak within the truth when I say, that not one in twenty of those children live, who are thus abandoned by their mothers. For this reason no mother should be allowed to suckle another's child till her own is either dead, or fit to be weaned. A regulation of this kind would save many lives among the poorer sort, and could do no hurt to the rich, as most women who make good nurses are able to suckle two children in succession upon the same milk.

* Tacitus, the celebrated Roman historian, complains greatly of the degeneracy of the Roman ladies in his time, with regard to the care of their offspring. He says that in former times, the greatest women in Rome, used to account it their chief glory to keep the house and attend their children; but that now the young infant was committed to the

Were the time that is generally spent by females in the acquisition of trifling accomplishments, employed in learning how to bring up their children; how to dress them so as not to hurt, cramp, or confine their motions; how to feed them with wholesome and nourishing food; how to exercise their tender bodies, so as best to promote their growth and strength; were these made the objects of female instruction, mankind would derive the greatest advantages from it. But while the education of females implies little more than what relates to dress and public shew, we have nothing to expect from them but ignorance even in the most important concerns.

Did mothers reflect on their own importance, and lay it to heart, they would embrace every opportunity of informing themselves of the duties which they owe to their infant offspring. It is their province, not only to form the body, but also to give the mind its most early bias. They have it very much in their power to make men healthy or valetudinary, useful in life or the pests of society.

But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare, and ought to assist in every thing that respects either the improvement of the body or mind. It is pity that the men should be so inattentive to this matter. Their negligence is one reason why females know so little of it. Women will ever be desirous to excel in such accomplishments as recommend them to the other sex. But men generally keep at such a distance from even the smallest acquaintance with the affairs of the nursery, that many would reckon it an affront, were they supposed to know any thing of them. Not so, however, with the kennel or the stables: a gentleman of the first rank is not ashamed to give directions concerning the management of his dogs and horses, yet would blush were he surprised in performing the same office for that being who derived its existence from himself, who is the heir of his fortunes, and the future hope of his country.

Nor have physicians themselves been sufficiently atten-

sole care of some poor Grecian wench, or other menial servant. We are afraid, wherever luxury and effeminacy prevail, there will be too much ground for this complaint.

tive to the management of children; this has been generally considered as the sole province of old women, while men of the first character in physic have refused to visit infants even when sick. Such conduct in the faculty has not only caused this branch of medicine to be neglected, but has also encouraged the other sex to assume an absolute title to prescribe for children in the most dangerous diseases. The consequence is, that a physician is seldom called till the good women have exhausted all their skill; when his attendance can only serve to divide the blame, and appease the disconsolate parents.

Nurses should do all in their power to prevent diseases; but when a child is taken ill, some person of skill ought immediately to be consulted. The diseases of children are generally acute, and the least delay is dangerous.

Were physicians more attentive to the diseases of infants, they would not only be better qualified to treat them properly when sick, but likewise to give useful directions for their management when well. The diseases of children are by no means so difficult to be understood as many imagine. It is true, children cannot tell their complaints; but the causes of them may be pretty certainly discovered by observing the symptoms, and putting proper questions to the nurses. Besides, the diseases of infants being less complicated, are easier cured than those of adults.*

It is really astonishing, that so little attention should in general be paid to the preservation of infants. What labour and expense are daily bestowed to prop an old tottering carcase for a few years, while thousands of those who might be useful in life, perish without being regarded! Mankind are too apt to value things according to their present, not their future, usefulness. Though this is of all others the most erroneous method of estimation, yet upon no other principle is it possible to account for the general indifference with respect to the death of infants.

* The common opinion, that the diseases of infants are hard to discover and difficult to cure, has deterred many physicians from paying that attention to them which they deserve. I can, however, from experience declare, that this opinion is without foundation; and that the diseases of infants are neither so difficult to discover nor so ill to cure, as those of adults.

Of Diseased Parents.

One great source of the diseases of children is, the UNHEALTHINESS OF PARENTS. It would be as reasonable to expect a rich crop from a barren soil, as that strong and healthy children should be born of parents whose constitution have been worn out with intemperance or disease.

An ingenious writer * observes, that on the constitution of mothers depends originally that of their offspring. No one who believes this, will be surprised, on a view of the female world, to find diseases and death so frequent among children. A delicate female, brought up within doors, an utter stranger to exercise and open air, who lives on tea and other slops, may bring a child into the world, but it will hardly be fit to live. The first blast of disease will nip the tender plant in the bud: or should it struggle through a few years' existence, its feeble frame, shaken with convulsions from every trivial cause, will be unable to perform the common functions of life, and prove a burden to society.

If, to the delicacy of mothers, we add the irregular lives of fathers, we shall see further cause to believe that children are often hurt by the constitution of their parents. A sickly frame may be originally induced by hardships or intemperance, but chiefly by the latter. It is impossible that a course of vice shall not spoil the best constitution: and, did the evil terminate here, it would be a just punishment for the folly of the sufferer; but when once a disease is contracted and rivetted in the habit, it is entailed on posterity. What a dreadful inheritance is the gout, the scurvy, or the king's-evil, to transmit to our offspring! how happy had it been for the heir of many a great estate, had he been born a beggar, rather than to inherit his father's fortunes at the expense of inheriting his diseases!

A person labouring under any incurable malady ought not to marry. He thereby not only shortens his own life, but transmits misery to others; but when both parties are deeply tainted with the scrophula, the scurvy, or the like, the effects must be still worse. If such have any issue, they must be miserable indeed. Want of attention to these

* Rousseau.

things, in forming connexions for life, has rooted out more families than plague, famine, or the sword; and as long as these connexions are formed from mercenary views, the evil will be continued.*

In our matrimonial contracts, it is amazing so little regard is had to the health and form of the object. Our sportsmen know that the generous courser cannot be bred out of the foundered jade, nor the sagacious spaniel out of the snarling cur. This is settled upon immutable laws. The man who marries a woman of a sickly constitution, and descended of unhealthy parents, whatever his views may be, cannot be said to act a prudent part. A diseased woman may prove fertile; should this be the case, the family must become an infirmary; what prospect of happiness the father of such a family has, we may leave any one to judge.†

Such children as have the misfortune to be born of diseased parents, will require to be nursed with greater care than others. This is the only way to make amends for the defects of constitution; and it will often go a great length. A healthy nurse, wholesome air, and sufficient exercise, will do wonders. But when these are neglected, little is to be expected from any other quarter. The defects of constitution cannot be supplied by medicine.

Those who inherit any family-disease ought to be very circumspect in their manner of living. They should consider well the nature of such disease, and guard against it by a proper regimen. It is certain, that family-diseases have often, by proper care, been kept off for one generation; and there is reason to believe that, by persisting in the same course, such diseases might at length be wholly eradicated. This is a subject very little regarded, though of the greatest importance. Family-constitutions are as capable of improvement as family-estates; and the libertine, who im-

* The Lacedemonians condemned their king Archidamus for having married a weak, puny woman; because, said they, instead of propagating a race of heroes, you will fill the throne with a progeny of changelings.

† The Jews, by their laws, were, in certain cases, forbid to have any manner of commerce with the diseased; and indeed, to this all wise legislators ought to have a special regard. In some countries, diseased persons have actually been forbid to marry. This is an evil of a complicated kind, a natural deformity, and political mischief; and therefore requires a public consideration.

pairs the one, does greater injury to his posterity than the prodigal who squanders the other.

Of the Clothing of Children.

The Clothing of an infant is so simple a matter, that it is surprising how any person should err in it; yet many children lose their lives, and others are deformed, by inattention to this article.

Nature knows of no use of clothes to an infant, but to keep it warm. All that is necessary for this purpose, is to wrap it in a soft loose covering. Were a mother left to the dictates of Nature alone, she would certainly pursue this course. But the business of dressing an infant has long been out of the hands of mothers, and has at last become a secret which none but adepts pretend to understand.

From the most early ages it has been thought necessary, that a woman in labour should have some person to attend her. This in time became a business; and as in all others, those who were employed in it, strove to outdo one another in the different branches of their profession. The dressing of a child came of course to be considered as the midwife's province; who no doubt imagined that the more dexterity she could shew in this article, the more her skill would be admired. Her attempts are seconded by the vanity of parents, who, too often desirous of making a shew of the infant as soon as it was born, were ambitious to have as much finery heaped upon it as possible. Thus it came to be thought as necessary for a midwife to excel in bracing and dressing an infant, as for a surgeon to be expert in applying bandages to a broken limb; and the poor child, as soon as it came into the world, had as many rollers and wrappers applied to its body, as if every bone had been fractured in the birth; while these were often so tight, as not only to gall and wound its tender frame, but even to obstruct the motion of the heart, lungs, and other organs necessary to life.

In most parts of Britain, the practice of rolling children with so many bandages is now in some measure laid aside; but it would still be a difficult task to persuade the generality of mankind, that the shape of an infant does not en-

tirely depend on the care of the midwife. So far, however, are all her endeavours to mend the shape from being successful, that they constantly operate the contrary way, and mankind become deformed in proportion to the means used to prevent it. How little deformity of body is to be found among uncivilized nations? So little indeed, that it is vulgarly believed they put all their deformed children to death. The truth is, they hardly know such a thing as a deformed child. Neither should we, if we followed their example. Savage nations never think of manacling their children. They allow them the full use of every organ, carry them abroad in the open air, wash their bodies daily in cold water, &c. By this management their children become so strong and hardy, that by the time our puny infants get out of the nurse's arms, theirs are able to shift for themselves.*

Among brute animals, no art is necessary to procure a fine shape. Though many of them are extremely delicate when they come into the world, yet we never find them grow crooked for want of swaddling-bands. Is nature less generous to the human kind? No: but we take the business out of Nature's hands.

Not only the analogy of other animals, but the very feelings of infants tell us, they ought to be kept easy and free from pressure. They cannot indeed tell their complaints, but they can shew signs of pain; and this they never fail to do, by crying when hurt by their clothes. No sooner are they freed from their bracings, than they seem pleased and happy: yet, strange infatuation! the moment they hold their peace, they are again committed to their chains.

If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of the children, has formed their bodies soft and flexible; and lest they should receive any injury from pressure in the womb, has surrounded the *fœtus* everywhere with fluids. This shews the care which Nature takes to prevent all unequal pressure on the

* A friend of mine, who was several years on the coast of Africa, tells me, that the natives neither put any clothes upon their children, nor apply to their bodies bandages of any kind, but lay them on a pallet, and suffer them to tumble about at pleasure; yet they are all straight, and seldom have any disease.

bodies of infants, and to defend them against every thing that might in the least cramp or confine their motions.

Even the bones of an infant are so soft and cartilaginous, that they readily yield to the slightest pressure, and easily assume a bad shape, which can never after be remedied. Hence it is, that so many people appear with high shoulders, crooked spines, and flat breasts, who were as well proportioned at their births as others, but had the misfortune to be squeezed out of shape by the application of stays and bandages.

Pressure, by obstructing the circulation, likewise prevents the equal distribution of nourishment to the different parts of the body, by which means the growth becomes unequal. One part grows too large, while another remains too small; and thus in time the whole frame becomes disproportioned and misshapen. To this we must add, when a child is cramped in its clothes it naturally shrinks from the part that is hurt; and by putting its body into unnatural postures, it becomes deformed by habit.

Deformity of body may indeed proceed from weakness or disease; but, in general, it is the effect of improper clothing. Nine-tenths, at least, of the deformity among mankind must be imputed to this cause. A deformed body is not only disagreeable to the eye, but by a bad figure both animal and vital functions must be impeded, and of course health impaired. Hence few people remarkably misshapen are strong or healthy.

The new motions which commence at the birth, as, the circulation of the whole mass of blood through the lungs, respiration, the peristaltic motion, &c. afford another strong argument for keeping the body of an infant free from all pressure. These organs, not having been accustomed to move, are easily stopped; but when this happens, death must ensue. Hardly any method could be devised more effectually to stop these motions, than bracing the body too tight with rollers* and bandages. Were these to be applied in the same manner to the body of an adult for an equal length of time, they would hardly fail to hurt the digestion and make him sick. How much more hurtful they

* This is by no means inveighing against a thing that does not happen. In many parts of Britain at this day, a roller, eight or ten feet in length, is applied tightly round the child's body as soon as it is born.

must prove to the tender bodies of infants, we shall leave any one to judge.

Whoever considers these things, will not be surprised that so many children die of convulsions soon after the birth. These fits are generally attributed to some inward cause; but in fact, they oftener proceed from our own imprudent conduct. I have known a child seized with convulsion fits soon after the midwife had done swaddling it, who, upon taking off the rollers and bandages, was immediately relieved, and never had the disease afterwards. Numerous examples of this might be given, were they necessary.

It would be safer to fasten the clothes of an infant with strings than pins, as they often gall and irritate their tender skins, and occasion disorders. Pins have been found sticking above half an inch into the body of a child, after it had died of convulsion fits, which in all probability proceeded from that cause.

Children are not only hurt by the tightness of their clothes, but also by the quantity. Every child has some degree of fever after the birth; and if it be loaded with too many clothes, the fever must be increased. But this is not all; the child is generally laid in bed with the mother, who is often likewise feverish: to which we may add the heat of the bed-chamber, the wines and other heating things, too frequently given to children immediately after the birth. When all these are combined, which does not seldom happen, they must increase the fever to such a degree as will endanger the life of the infant.

The danger of keeping infants too hot will further appear, if we consider that, after they have been some time in the situation mentioned above, they are often sent into the country to be nursed in a cold house. Is it any wonder if a child, from such a transition, catches a mortal cold, or contracts some other fatal disease? When an infant is kept too hot, its lungs, not being sufficiently expanded, are apt to remain weak and flaccid for life; hence proceed coughs, consumptions, and other diseases of the breast.

It would answer little purpose to specify the particular species of dress proper for an infant. These will always vary in different countries, according to custom and the humour of parents. The great rule to be observed is,

That a child have no more clothes than are necessary to keep it warm, and that they be quite easy for its body.

Stays are the very bane of infants. A volume would not suffice to point out all the bad effects of this ridiculous piece of dress both on children and adults. The madness in favour of stays seems, however, to be somewhat abated; and it is to be hoped the world will, in time, become wise enough to know, that the human shape does not solely depend upon whalebone and bend leather.*

I shall only add with respect to the clothes of children, that they ought to be kept thoroughly clean. Children perspire more than adults; and if their clothes be not frequently changed, they become very hurtful. Dirty clothes not only gall and fret the tender skins of infants, but likewise occasion ill smells; and, what is worse, tend to produce vermin and cutaneous diseases.

Cleanliness is not only agreeable to the eye, but tends greatly to preserve the health of children. It promotes the perspiration, and, by that means, frees the body from superfluous humours, which, if retained, could not fail to occasion diseases. No mother or nurse can have any excuse for allowing a child to be dirty. Poverty may oblige her to give it coarse clothes; but if she does not keep them clean, it must be her own fault.

Of the Food of Children.

Nature not only points out the food proper for an infant, but actually prepares it. This, however, is not sufficient to prevent some who think themselves wiser than Nature, from attempting to bring up their children without her provision. Nothing can shew the disposition which mankind have to depart from Nature, more than their endeavouring to bring up children without the breast. The mother's milk, or that

* Stays made of bend leather are worn by all the women of lower station in many parts of England.

I am sorry to understand, that there are still mothers mad enough to lace their daughters very tight in order to improve their shape. As reasoning would be totally lost upon such people, I shall beg leave just to ask them, Why there are ten deformed women for one man? and likewise to recommend to their perusal a short moral precept, which forbids us to *deform the human body.*

of a healthy nurse, is unquestionably the best food for an infant. Neither art nor Nature can afford a proper substitute for it. Children may seem to thrive for a few months without the breast; but when teething, the small-pox, and other diseases incident to childhood, come on, they generally perish.

A child, soon after the birth, shews an inclination to suck; and there is no reason why it should not be gratified. It is true, the mother's milk does not always come immediately after the birth; but this is the way to bring it: besides, the first milk that the child can squeeze out of the breast answers the purpose of cleansing better than all the drugs in the apothecary's shop, and at the same time prevents inflammations of the breast, fevers, and other diseases incident to mothers.

It is strange how people came to think that the first thing given to a child should be drugs. This is beginning with medicine by times, and no wonder if they generally end with it. It sometimes happens indeed, that a child does not discharge the *meconium*, so soon as could be wished; this has induced physicians, in such cases, to give something of an opening nature to cleanse the first passages. Midwives have improved upon this hint, and never fail to give syrups, oils, &c. whether they be necessary or not. Cramming an infant with such indigestible stuff as soon as it is born, can hardly fail to make it sick, and is more likely to occasion diseases than to prevent them. Children are seldom long after the birth without having passage both by stool and urine; though these evacuations may be wanting for some time without any danger. But if children must have something before they be allowed the breast, let it be a little thin water-pap, to which may be added an equal quantity of new milk; or rather water alone, with the addition of a little moist sugar. If this be given without any wine or spiceries, it will neither heat the blood, load the stomach, nor occasion gripes.

Upon the first sight of an infant, almost every person is struck with the idea of its being weak, feeble, and wanting support. This naturally suggests the need of cordials. Accordingly wines are universally mixed with the first food of children. Nothing can be more fallacious than this way of reasoning, or more hurtful to infants than the conduct founded upon it. Children require very little food for some

time after the birth ; and what they receive should be thin, weak, light, and of a cooling quality. A very small quantity of wine is sufficient to heat and inflame the blood of an infant ; but every person conversant in these matters must know, that most of the diseases of infants proceed from the heat of their humours.

If the mother or nurse has enough of milk, the child will need little or no other food before the third or fourth month. It will then be proper to give it, once or twice a-day, a little of some food that is easy of digestion, as water-pap, milk-pottage, weak broth with bread in it, and such like. This will ease the mother, will accustom the child by degrees to take food, and will render the weaning both less difficult and less dangerous. All great and sudden transitions are to be avoided in nursing. For this purpose, the food of children ought not only to be simple, but to resemble, as nearly as possible, the properties of milk. Indeed, milk itself should make a principal part of their food, not only before they are weaned, but for some time after.

Next to milk, we would recommend good light bread. Bread may be given to a child as soon as it shews an inclination to chew ; and it may at all times be allowed as much plain bread as it will eat. The very chewing of bread will promote the cutting of the teeth, and the discharge of saliva, while, by mixing with the nurse's milk in the stomach, it will afford an excellent nourishment. Children discover an early inclination to chew whatever is put into their hands. Parents observe the inclination, but generally mistake the object. Instead of giving the child something which may at once exercise its gums and afford it nourishment, they commonly put into its hands a piece of hard metal, or impenetrable coral. A crust of bread is the best gum-stick. It not only answers the purpose better than any thing else, but has the additional properties of nourishing the child and carrying the saliva down into the stomach, which is too valuable a liquor to be lost.

Bread, besides being used dry, may be many ways prepared into food for children. One of the best methods is to boil it in water, afterwards pouring the water off, and mixing with the bread a proper quantity of new milk unboiled. Milk is both more wholesome and nourishing this way than boiled, and is less apt to occasion costiveness. For a child farther

advanced, bread may be mixed in veal or chicken-broth, made into puddings, or the like. Bread is a proper food for children at all times, provided it be plain, made of wholesome grain, and well fermented; but when enriched with fruits, sugars, or such things, it becomes very unwholesome.

It is soon enough to allow children animal food when they have got teeth to eat it. They should never taste it till after they are weaned, and even then they ought to use it sparingly. Indeed, when children live wholly on vegetable food, it is apt to sour on their stomachs; but, on the other hand, too much flesh heats the body, and occasions fevers and other inflammatory diseases. This plainly points out a due mixture of animal and vegetable food as most proper for children.

Few things prove more hurtful to infants than the common method of sweetening their food. It entices them to take more than they ought to do, which makes them grow fat and bloated. It is pretty certain, if the food of children were quite plain, that they would never take more than enough. Their excesses are entirely owing to nurses. If a child be gorged with food at all hours, and enticed to take it, by making it sweet and agreeable to the palate, is it any wonder that such a child should in time be induced to crave more food than it ought to have?

Children may be hurt by too little as well as by too much food. After a child is weaned, it ought to be fed four or five times a-day; but should never be accustomed to eat in the night; neither should it have too much at a time. Children thrive best with small quantities of food frequently given. This neither overloads the stomach nor hurts the digestion, and is certainly most agreeable to nature.

Writers on nursing have inveighed with such vehemence against giving children too much food, that many parents, by endeavouring to shun that error, have run into the opposite extreme, and ruined the constitutions of their children. But the error of pinching children in their food is more hurtful than the other extreme. Nature has many ways of relieving herself when overcharged: but a child who is pinched with hunger, will never become a strong or a healthy man. That errors are frequently committed on both sides, we are ready to acknowledge; but where one child is hurt

by the quantity of its food, ten suffer from the quality. This is the principal evil, and claims our strictest attention.

Many people imagine, that the food which they themselves love cannot be bad for their children; but this notion is very absurd. In the more advanced periods of life we often acquire an inclination for food, which, when children, we could not endure. Besides, there are many things that by habit may agree very well with the stomach of a grown person, which would be hurtful to a child: as high-seasoned, salted, and smoke-dried provisions, &c. It would also be improper to feed children with fat meat, strong broths, rich soups, or the like.

All strong liquors are hurtful to children. Some parents teach their children to guzzle ale, and other fermented liquors, at every meal. Such a practice cannot fail to do mischief. These children seldom escape the violence of the small-pox, measles, hooping-cough, or some inflammatory disorder. Milk, water, butter-milk, or whey, are the most proper for children to drink. If they have any thing stronger it may be fine small-beer, or a little wine mixed with water. The stomachs of children can digest well enough without the assistance of warm stimulants: besides being naturally hot, they are easily hurt by every thing of a heating quality.

Few things are more hurtful to children than unripe fruits. They weaken the powers of digestion, and sour and relax the stomach, by which means it becomes a proper nest for insects. Children indeed shew a great inclination for fruit, and I am apt to believe, that if good ripe fruit were allowed them in proper quantity, it would have no bad effects. We never find a natural inclination wrong, if properly regulated. Fruits are generally of a cooling nature, and correct the heat and acrimony of the humours. This is what most children require; only care should be taken lest they exceed. Indeed the best way to prevent children from going to excess in the use of fruit, or eating that which is bad, is to allow them a proper quantity of what is good.*

* Children are always sickly in the fruit season, which may be thus accounted for: Two-thirds of the fruit which comes to market in this country is really unripe; and children, not being in a condition to judge for themselves, eat whatever they can lay their hands upon, which often proves little better than a poison to their tender bowels. Servants, and others who have the care of children, should be strictly forbidden to give them any fruit without the knowledge of their parents.

Roots which contain a crude viscid juice should be sparingly given to children. They fill the body with gross humours, and tend to produce eruptive diseases. This caution is peculiarly necessary for the poor; glad to obtain at a small price, what will fill the bellies of their children, they stuff them two or three times a-day with crude vegetables. Children had better eat a smaller quantity of food which yields a wholesome nourishment, than be crammed with what their digestive powers are unable properly to assimilate.

Butter ought likewise to be sparingly given to children. It both relaxes the stomach, and produces gross humours. Indeed most things that are fat or oily have this effect. Butter when salted becomes still more hurtful. Instead of butter, so liberally given to children in most parts of Britain, we would recommend honey. Children who eat honey are seldom troubled with worms: they are also less subject to cutaneous diseases, as itch, scabbed head, &c.

Many people err in thinking that the diet of children ought to be altogether moist. When children live entirely upon slops, it relaxes their solids, renders them weak, and disposes them to the rickets, the scrophula, and other glandular disorders. Relaxation is one of the most general causes of the diseases of children. Every thing, therefore, which tends to unbrace their solids, ought to be carefully avoided.

We would not be understood by these observations as confining children to any particular kind of food. Their diet may be frequently varied, provided always that sufficient regard be had to simplicity.

Of the Exercise of Children.

Of all the causes which conspire to render the life of man short and miserable, none has greater influence than the want of proper EXERCISE: healthy parents, wholesome food, and proper clothing, will avail little, where exercise is neglected. Sufficient exercise will make up for several defects in nursing: but nothing can supply the want of it. It is absolutely necessary to the health, the growth, and the strength of children.

The desire of exercise is coeval with life itself. Were

this principle attended to, many diseases might be prevented. But, while indolence and sedentary employments prevent two-thirds of mankind from either taking sufficient exercise themselves, or giving it to their children, what have we to expect but diseases and deformity among their offspring? The rickets, so destructive to children, never appeared in Britain till manufactures began to flourish, and people, attracted by the love of gain, left the country to follow sedentary employments in great towns. It is amongst those people that this disease chiefly prevails, and not only deforms, but kills many of their offspring.

The conduct of other young animals shews the propriety of giving exercise to children. Every other animal makes use of its organs of motion as soon as it can, and many of them, even when under no necessity of moving in quest of food, cannot be restrained without force. This is evidently the case with the calf, the lamb, and most other young animals. If these creatures were not permitted to frisk about and take exercise, they would soon die or become diseased. The same inclination appears very early in the human species; but as they are not able to take exercise themselves, it is the business of their parents and nurses to assist them.

Children may be exercised various ways. The best method, while they are light, is to carry them about in the nurse's arms.* This gives the nurse an opportunity of talking to the child, and of pointing out every thing that may please and delight its fancy. Besides, it is much safer than swinging an infant in a machine, or leaving it to the care of such as are not fit to take care of themselves. Nothing can be more absurd than to set one child to keep another; this conduct has proved fatal to many infants, and has rendered others miserable for life.

When children begin to walk, the safest and best method of leading them about is by the hands. The common way, of swinging them in leading-strings fixed to their backs, has several bad consequences. It makes them throw their

* The nurse ought to be careful to keep the child in a proper position; as deformity is often the consequence of inattention to this circumstance. Its situation ought also to be frequently changed. I have known a child's legs bent all on one side, by the nurse carrying it constantly on one arm.

bodies forward, and press with their whole weight upon their stomach and breast; by this means the breathing is obstructed, the breast flattened, and the bowels compressed; which must hurt the digestion, and occasion consumptions of the lungs, and other diseases.

It is a common notion, that if children are set upon their feet too soon, their legs will become crooked. There is reason to believe that the very reverse of this is true. Every member acquires strength in proportion as it is exercised. The limbs of children are weak indeed, but their bodies are proportionably light; and had they skill to direct themselves, they would soon be able to support their own weight. Who ever heard of any other animal that became crooked by using its legs too soon? Indeed, if a child is not permitted to make any use of its legs till a considerable time after its birth, and be then set upon them with its whole weight at once, there may be some danger; but this proceeds entirely from the child's not having been accustomed to use its legs from the beginning.

Mothers of the poorer sort, think they are great gainers by making their children lie or sit while they themselves work. In this they are greatly mistaken. By neglecting to give their children exercise, they are obliged to keep them a long time before they can do any thing for themselves, and to spend more on medicine than would have paid for proper care.

To take care of their children, is the most useful business in which even the poor can be employed: but, alas! it is not always in their power. Poverty often obliges them to neglect their offspring, in order to procure the necessaries of life. When this is the case, it becomes the interest as well as the duty of the public to assist them. Ten thousand times more benefit would accrue to the State, by enabling the poor to bring up their own children, than from all the hospitals* that ever can be erected for that purpose.

* If it were made the interest of the poor to keep their children alive, we should lose very few of them. A small premium given annually to each poor family, for every child they have alive at the year's end, would save more infant lives than if the whole revenue of the crown were expended on hospitals for that purpose. This would make the poor esteem fertility a blessing; whereas many of them think it the greatest curse

Whoever considers the structure of the human body will soon be convinced of the necessity of exercise for the health of children. The body is composed of an infinite number of tubes, whose fluids cannot be pushed on without the action and pressure of the muscles. But, if the fluids remain inactive, obstructions must happen, and the humours will of course be vitiated, which cannot fail to occasion diseases. Nature has furnished both the vessels which carry the blood and lymph with numerous valves, in order that the action of every muscle might push forward their contents; but without action, this admirable contrivance can have no effect. This part of the animal economy proves to a demonstration the necessity of exercise for the preservation of health.

Arguments to shew the importance of exercise might be drawn from every part of the animal economy; without exercise, the circulation of the blood cannot be properly carried on, nor the different secretions duly performed; without exercise, the fluids cannot be properly prepared, nor the solids rendered strong or firm. The action of the heart, the motion of the lungs, and all the vital functions, are greatly assisted by exercise. But to point out the manner in which these effects are produced, would lead us farther into the economy of the human body, than most of those for whom this treatise is intended would be able to follow. We shall therefore only add, that when exercise is neglected, none of the animal functions can be duly performed; and when this is the case, the whole constitution must go to wreck.

A good constitution ought certainly to be our first object in the management of children. It lays a foundation for their being useful and happy in life; and whoever neglects it, not only fails in his duty to his offspring, but to society.

One very common error of parents, by which they hurt the constitutions of their children, is the sending them too young to school. This is often done solely to prevent trouble. When the child is at school, he needs no keeper. Thus the schoolmaster is made the nurse; and the poor child is fixed to a seat seven or eight hours a-day, which time ought to be spent in exercise and diversions. Sitting so long can-

that can befal them; and in place of wishing their children to live, so far does poverty get the better of natural affection, that they are often very happy when they die.

not fail to produce the worst effects upon the body; nor is the mind less injured. Early application weakens the faculties, and often fixes in the mind an aversion to books, which continues for life.*

But suppose this were the way to make children scholars, it certainly ought not to be done at the expence of their constitutions. Our ancestors, who seldom went to school very young, were not less learned than we. But we imagine the boy's education will be quite marred, unless he be carried to school in his nurse's arms. No wonder if such hot-bed plants, seldom become either scholars or men!

Not only the confinement of children in public schools, but their number, often proves hurtful. Children are much injured by being kept in crowds within doors; their breathing not only renders the place unwholesome, but if any one of them happen to be diseased, the rest catch the infection. A single child has been often known to communicate the bloody flux, the hooping-cough, the itch, or other diseases, to almost every individual in a numerous school.

But, if fashion must prevail, and infants are to be sent to school, we would recommend it to teachers, as they value the interests of society, not to confine them too long at a time, but allow them to run about and play at such active diversions as may promote their growth, and strengthen their constitutions. Were boys, instead of being whipped for stealing an hour to run, ride, swim, or the like, encouraged to employ a proper part of their time in these manly and useful exercises, it would have many excellent effects.

It would be of great service to boys, if, at a proper age, they were taught the military exercise. This would increase their strength, inspire them with courage, and when their country called for their assistance, would enable them to act in her defence, without being obliged to undergo a

* It is undoubtedly the duty of parents to instruct their children, at least till they are of an age proper to take some care of themselves. This would tend much to confirm the ties of parental tenderness and filial affection, of the want of which there are at present so many deplorable instances. Though few fathers have time to instruct their children, yet most mothers have; and surely they cannot be better employed.

tedious and troublesome course of instructions, at a time when they are less fit to learn new motions, gestures, &c.*

An effeminate education will infallibly spoil the best natural constitution; and if boys are brought up in a more delicate manner than even girls ought to be, they will never be men.

Nor is the common education of girls less hurtful to the constitution than that of boys. Miss is set down to her frame before she can put on her own clothes; and is taught to believe, that to excel at the needle is the only thing that can entitle her to general esteem. It is unnecessary here to insist upon the dangerous consequences of obliging girls to sit too much. They are pretty well known, and are too often felt at a certain time of life. But supposing this critical period to be got over, greater dangers still wait them when they come to be mothers. Women who have been early accustomed to a sedentary life, generally run great hazard in child-bed; while those who have been used to romp about, and take sufficient exercise, are seldom in any danger.

One hardly meets with a girl who can at the same time boast of early performances by the needle, and a good constitution. Close and early confinement generally occasions indigestions, headaches, pale complexions, pain of the stomach, loss of appetite, coughs, consumptions of the lungs, and deformity of body. The last of these indeed is not to be wondered at, considering the awkward postures in which girls sit at many kinds of needlework, and the delicate flexible state of their bodies in the early periods of life.

Would mothers, instead of having their daughters instructed in many trifling accomplishments, employ them in plain work and housewifery, and allow them sufficient exercise in the open air, they would both make them more healthy mothers, and more useful members of society. I am no enemy to genteel accomplishments, but would have them only considered as secondary, and always disregarded when they impair health.

Many people imagine it a great advantage for children

* I am happy to find that the masters of academies now begin to put in practice this advice. Each of them ought to keep a drill-serjeant for teaching the boys the military exercise. This, besides contributing to their health and vigour of body, would have many other happy effects.

to be early taught to earn their bread. This opinion is certainly right, provided they were so employed as not to hurt their health or growth; but, when these suffer, society, instead of being benefited, is a real loser by their labour. There are few employments, except sedentary ones, by which children can earn a livelihood; and if they be set to these too soon, it ruins their constitutions. Thus, by gaining a few years from childhood, we generally lose twice as many in the latter period of life, and even render the person less useful while he does live.

In order to be satisfied of the truth of this observation, we need only look into the great manufacturing towns, where we shall find a puny degenerate race of people, weak and sickly all their lives, seldom exceeding the middle period of life: or if they do, being unfit for business, they become a burden to society. Thus arts and manufactures, though they may increase the riches of a country, are by no means favourable to the health of its inhabitants. Good policy would therefore require, that such people as labour during life, should not be set too early to work. Every person conversant in the breed of horses, or other working animals, knows, that if they be set to hard labour too soon, they will never turn out to advantage. This is equally true with respect to the human species.

There are, nevertheless, various ways of employing young people without hurting their health. The easier parts of gardening, husbandry, or any business carried on without doors, are most proper. These are employments which most young people are fond of, and some parts of them may be always adapted to their age, taste, and strength.*

Such parents, however, as are under the necessity of employing their children within doors, ought to allow them sufficient time for active diversions without. This would both encourage them to do more work, and prevent their constitutions from being hurt.

Some imagine, that exercise within doors is sufficient; but they are greatly mistaken. One hour spent in running or any other exercise without doors, is worth ten within. When children cannot go abroad, they may indeed be ex-

* I have been told that in China, where the police is the best in the world, all the children are employed in the easier parts of gardening and husbandry; as weeding, gathering stones off the land, and such like.

ercised at home. The best method of doing this is to make them run about in a long room, or dance. This last kind of exercise, if not carried to excess, is of excellent service to young people. It cheers the spirits, promotes perspiration, strengthens the limbs, &c. I knew an eminent physician who used to say, that he made his children dance, instead of giving them physic. It were well if more people followed his example.

The COLD BATH may be considered as an aid to exercise. By it the body is braced and strengthened, the circulation and secretions promoted, and, were it conducted with prudence, many diseases, as rickets, scrophula, &c. might thereby be prevented. The ancients, who took every method to render children hardy and robust, were no strangers to the use of the cold bath: and, if we may credit report, the practice of immersing children daily in cold water must have been very common among our ancestors.

The greatest objection to the use of the cold bath arises from the superstitious prejudices of nurses. These are often so strong, that it is impossible to bring them to make a proper use of it. I have known some of them who would not dry a child's skin after bathing it, lest it should destroy the effect of the water. Others will even put clothes dipt in the water upon the child, and either put it to bed, or suffer it to go about in that condition. Some believe, that the whole virtue of the water depends upon its being dedicated to a particular saint: while others place their confidence in a certain number of dips, as three, seven, nine, or the like; and the world could not persuade them, if these do not succeed, to try it a little longer. Thus, by the whims of nurses, children lose the benefit of the cold bath, and the hopes of the physician from that medicine are often frustrated.

We ought not, however, entirely to set aside the cold bath, because some nurses make a wrong use of it. Every child, when in health, should at least have its extremities daily washed in cold water. This is a partial use of the cold bath, and is better than none. In winter this may suffice; but in the warm season, if a child be relaxed, or seem to have a tendency to the rickets or scrophula, its whole body ought to be frequently immersed in cold water. Care, however, must be taken not to do this when the body is hot, or the stomach full. The child should be dipped only once

at a time, should be taken out immediately, and have its skin well rubbed with a dry cloth.

The bad Effects of Unwholesome Air upon Children.

Few things prove more destructive to children than confined or unwholesome air. This is one reason why so few of those infants, who are put into hospitals, or parish workhouses, live. These places are generally crowded with old, sickly, and infirm people; by which means the air is rendered so extremely pernicious, that it becomes a poison to infants.

Want of wholesome air is likewise destructive to many of the children born in great towns. There the poorer sort of inhabitants live in low, dirty, confined houses, to which the fresh air has scarcely any access. Though grown people, who are hardy and robust, may live in such situations, yet they generally prove fatal to their offspring, few of whom arrive at maturity, and those who do are weak and deformed. As such people are not in a condition to carry their children abroad into the open air, we must lay our account with losing the greater part of them. But the rich have not this excuse. It is their business to see that their children be daily carried abroad, and that they be kept in the open air for a sufficient time. This will always succeed better if the mother goes along with them. Servants are often negligent in these matters, and allow a child to sit or lie on the damp ground, instead of leading or carrying it about. The mother surely needs air as well as her children; and how can she be better employed than in attending them?

A very bad custom prevails, of making children sleep in small apartments, or crowding two or three beds into one chamber. Instead of this, the nursery ought always to be the largest and best-aired room in the house. When children are confined in small apartments, the air not only becomes unwholesome, but the heat relaxes their solids, renders them delicate, and disposes them to colds and many other disorders. Nor is the custom of wrapping them up too close in cradles less pernicious. One would think that nurses were afraid lest children should suffer by breathing

free air, as many of them actually cover the child's face while asleep, and others wrap a covering over the whole cradle, by which means the child is forced to breathe the same air over and over all the time it sleeps. Cradles indeed are on many accounts hurtful to children, and it would be better if the use of them were totally laid aside.*

A child is generally laid to sleep with all its clothes on; and if a number of others are heaped above them, it must be overheated; by which means it cannot fail to catch cold on being taken out of the cradle, and exposed to the open air with only its usual clothing, which is too frequently the case.

Children who are kept within doors all day, and sleep all night in warm close apartments, may, with great propriety, be compared to plants nursed in a hot-house instead of the open air. Though such plants may by this means be kept alive for some time, they will never arrive at that degree of strength, vigour, and magnitude, which they would have acquired in the open air, nor would they be able to bear it afterwards should they be exposed to it.

Children brought up in the country, who have been accustomed to open air, should not be too early sent to great towns, where it is confined and unwholesome. This is frequently done with a view to forward their education, but proves very hurtful to their health. All schools and seminaries of learning ought, if possible, to be so situated as to have fresh, dry, wholesome air, and should never be too much crowded.

Without entering into a detail of the particular advantages of wholesome air to children, or of the bad consequences which proceed from the want of it, I shall only observe, that of several thousands of children who have been under my care, I do not remember one instance of a single

* It is amazing how children escape suffocation, considering the manner in which they are often rolled up in flannels, &c. I lately attended an infant, whom I found muffled up over head and ears in many folds of flannel, though it was in the middle of June. I begged for a little free air to the poor babe; but though this indulgence was granted during my stay, I found it always on my return in the same situation. Death, as might be expected, soon freed the infant from all its miseries; but it was not in my power to free the minds of its parents from those prejudices which proved fatal to their child.

I was very lately called to see an infant which was said to be expiring in convulsion fits. I desired the mother to strip the child, and wrap it in a loose covering. It had no more convulsion fits.

child who continued healthy in a close confined situation; but have often known the most obstinate diseases cured by removing them from such a situation to an open free air.

Of Nurses.

It is not here intended to lay down rules for the choice of nurses. This would be wasting time. Common sense will direct every one to choose a woman who is healthy, and has plenty of milk.* If she be at the same time cleanly, careful, and good-natured, she can hardly fail to make a proper nurse. After all, however, the only certain proof of a good nurse, is a healthy child upon her breast. But, as the misconduct of nurses often proves fatal to children, it will be of importance to point out a few of their most baneful errors, in order to rouse the attention of parents, and to make them look more strictly into the conduct of those to whom they commit the care of their infant offspring.

Though it admits of some exceptions, yet we may lay it down as a general rule, *That every woman who nurses for hire should be carefully looked after, otherwise she will not do her duty.* For this reason parents ought always to have their children nursed under their own eye, if possible; and where this cannot be done, they should be extremely circumspect in the choice of those persons to whom they intrust them. It is folly to imagine that any woman who abandons her own child to suckle another for the sake of gain, should feel all the affections of a parent towards her nursling; yet so necessary are these affections in a nurse, that but for them the race would soon be extinct.

One of the most common faults of those who nurse for hire, is dosing children with stupefactives, or such things as lull them asleep. An indolent nurse, who does not give a child sufficient exercise in the open air to make it sleep, and does not choose to be disturbed by it in the night, will seldom fail to procure for it a dose of laudanum, diacodium, saffron, or what answers the same purpose, a dose of spirits or other strong liquors. These, though they be cer-

* I have often known people so imposed upon, as to give an infant to a nurse to be suckled, who had not one drop of milk in her breast.

tain poison to infants, are every day administered by many who bear the character of very good nurses.*

A nurse who has not milk enough, is apt to imagine that this defect may be supplied by giving the child wines, cordial waters, or other strong liquors. This is an egregious mistake. The only thing that has any chance to supply the place of the nurse's milk, must be somewhat nearly of the same quality, as cow's milk, ass's milk, or beef tea, with a little bread. It never can be done by the help of strong liquors. These, instead of nourishing an infant, never fail to produce the contrary effect.

Children are often hurt by their nurses suffering them to cry long and vehemently. This strains their tender bodies, and frequently occasions ruptures, inflammations of the throat, lungs, &c. A child never continues to cry long without some cause, which might always be discovered by proper attention; and the nurse who can hear an infant cry till it has almost spent itself, without endeavouring to please it, must be cruel indeed, and is unworthy to be intrusted with the care of a human creature.

Nurses who deal much in medicine are always to be suspected. They trust to it, and neglect their duty. I never knew a good nurse who had her Godfrey's cordial, Daffy's elixir, Dalby's carminative, &c. at hand. Such generally imagine, that a dose of medicine will make up for all defects in food, air, exercise, and cleanliness. By errors of this kind, I will venture to say, that one half the children who die annually in London lose their lives.

Allowing children to continue long wet, is another very pernicious custom of indolent nurses. This is not only disagreeable, but it galls and frets the infant, and by relaxing the solids occasions scrophulas, rickets, and other diseases. A dirty nurse is always to be suspected.

Nature often attempts to free the bodies of children from bad humours, by throwing them upon the skin; by this means fevers and other diseases are prevented. Nurses are apt to mistake such critical eruptions for an itch, or some other infectious disorder. Accordingly they take every method to drive them in. In this way many children lose

* If a mother, on visiting her child at nurse, finds it always asleep, I would advise her to remove it immediately; otherwise it will soon sleep its last.

their lives; and no wonder, as Nature is opposed in the very method she takes to relieve them. It ought to be a rule which every nurse should observe, never to stop any eruption without proper advice, or being well assured that it is not of a critical nature. At any rate, it is never to be done without previous evacuations.

Loose stools is another method by which Nature often prevents or carries off the diseases of infants. If these proceed too far, no doubt they ought to be checked; but this is never to be done without the greatest caution. Nurses, upon the first appearance of loose stools, frequently fly to the use of astringents, or such things as bind the body. Hence inflammatory fevers, and other fatal diseases, are occasioned. A dose of rhubarb, a gentle vomit, or some other evacuations, should always precede the use of astringent medicines.

One of the greatest faults of nurses is, concealing the diseases of children from their parents. This they are extremely ready to do, especially when the disease is the effect of their own negligence. Many instances might be given of persons who have been rendered lame for life by a fall from their nurse's arms, which she, through fear, concealed till the misfortune was past cure. Every parent who intrusts a nurse with the care of a child, ought to give her the strictest charge not to conceal the most trifling disorder or misfortune that may befal it.

We can see no reason why a nurse, who conceals any misfortune which happens to a child under her care till it loses its life or limbs, should not be punished. A few examples of this would save the life of many infants: but as there is little reason to expect that it ever will be the case, we would earnestly recommend it to all parents to look carefully after their children, and not to trust so valuable a treasure entirely in the hands of an hireling.

No person ought to imagine these things unworthy of his attention. On the proper management of children depend not only their health and usefulness in life, but likewise the safety and prosperity of the state to which they belong. Effeminacy ever will prove the ruin of any state where it prevails; and, when its foundations are laid in infancy, it can never afterwards be wholly eradicated. Parents who love their offspring, and wish well to their coun-

try, ought therefore, in the management of their children, to avoid every thing that may have a tendency to make them weak or effeminate, and to take every method in their power to render their constitutions strong and hardy.

> ———By arts like these
> Laconia nurs'd of old her hardy sons;
> And Rome's unconquer'd legions urg'd their way,
> Unhurt, thro' every toil in every clime. ARMSTRONG.

Few things tend more to the destruction of children than drenching them with drugs. That medicine may be *sometimes* necessary for children, I do not deny; but that it hurts them ten times for once it does them good, I will venture to assert. A London mother, the moment her child seems to ail any thing, runs immediately to the apothecary, who throws in his powders, pills, and potions, till the poor infant is poisoned; when the child might have been restored to perfect health by a change of diet, air, exercise, clothing, or some very easy and simple regulation.

But misguided fondness is not satisfied with drugging children from the apothecary's shop, many of them are *fed* from the same quarter. A starch from the West Indies called flour of arrow-root, is the food of those infants whose parents can afford to pay for it. I lately offended a mother very much by saying, it was not half so good as oatmeal, though more than ten times the price. Of this, however, she had sufficient proof by a child in her arms, who had been fed on that root, and though a year and a half old, could scarcely put a foot to the ground, while her neighbour's child, only nine months old, but nursed in the north country manner, could, by a hold of the finger, run all over the house.

I have taken notice of this powder, to shew the influence of fashion even in the feeding of an infant. I wish it were the only instance I could give of the fatal effects of the same cause. Ten thousand infants in this island, before they are out of the nurse's arms, sip tea twice a-day; which, to be sure, is the true way to propagate heroes!

CHAP. II.

OF THE LABORIOUS, THE SEDENTARY, AND THE STUDIOUS.

That men are exposed to particular diseases from the occupations which they follow, is a fact well known; but to remedy this evil is a matter of some difficulty. Most people are under the necessity of following those employments to which they have been bred, whether they be favourable to health or not. For this reason, instead of inveighing, in a general way, as some authors have done, against those occupations which are hurtful to health, we shall endeavour to point out the circumstances in each of them from which the danger chiefly arises, and to propose the most rational methods of preventing it.

Chemists, founders, forgers, glass-makers, and several other artists, are hurt by the unwholesome air which they are obliged to breathe. This air is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with phlogiston as to be rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments.

To prevent such consequences as far as possible, the places where these occupations are carried on ought to be constructed in such a manner as to discharge the smoke and other exhalations, and admit a free current of fresh air. Such artists ought never to continue long at work; and when they give over, they should suffer themselves to cool gradually, and put on their clothes before they go into the open air. They ought never to drink large quantities of cold, weak, or watery liquors while their bodies are hot, nor to indulge in raw fruits, salads, or any thing that is cold on the stomach.*

Miners, and all who work under ground, are likewise

* When persons heated with labour have drunk cold liquor, they ought to continue at work for some time after.

hurt by unwholesome air. The air, by its stagnation in deep mines, not only loses its proper spring and other qualities necessary for respiration, but is often loaded with such noxious exhalations as to become a most deadly poison.

The two kinds of air which prove most destructive to miners, are what they call the *fire damp* and the *choke damp.* In both cases the air becomes a poison by its being loaded with phlogiston. The danger from the former may be obviated by making it explode before it accumulates in too great quantities; and the latter may be generally carried off by promoting a free circulation of air in the mine.

Miners are not only hurt by unwholesome air, but likewise by the particles of metal which adhere to their skin, clothes, &c. These are absorbed, or taken up into the body, and occasion palsies, vertigoes, and other nervous affections, which often prove fatal. Fallopius observes, that those who work in mines of mercury seldom live above three or four years. Lead, and several other metals, are likewise very pernicious to the health.

Miners ought never to go to work fasting, nor to continue too long at work. Their food ought to be nourishing, and their liquor generous: nothing more certainly hurts them than living too low. They should by all means avoid costiveness. This may either be done by chewing a little rhubarb, or taking a sufficient quantity of salad oil. Oil not only opens the body, but sheathes and defends the intestines from the effects of the metals. All who work in mines or metals ought to wash carefully, and to change their clothes as soon as they give over working. Nothing would tend more to preserve the health of such people than a strict, and almost religious, regard to cleanliness.

Plumbers, painters, gilders, smelters, makers of white lead, and many others who work in metals, are liable to the same diseases as miners; and ought to observe the same directions for avoiding them.

Tallow-chandlers, boilers of oil, and all who work in putrid animal substances, are likewise liable to suffer from the unwholesome smells or effluvia of the bodies. They ought to pay the same regard to cleanliness as miners; and when they are affected with nausea, sickness, or indigestion, we would advise them to take a vomit or a gentle purge. Such substances ought always to be manufactured as soon as pos-

sible. When long kept, they not only become unwholesome to those who manufacture them, but likewise to people who live in the neighbourhood.

It would greatly exceed the limits of this part of our subject, to specify the diseases peculiar to persons of every occupation; we shall therefore consider mankind under the general classes of *Laborious*, *Sedentary*, and *Studious*.

The Laborious.

Though those who follow laborious employments are in general the most healthy of mankind, yet the nature of their occupations, and the places where they are carried on, expose them more particularly to some diseases. Husbandmen, for example, are exposed to all the vicissitudes of the weather, which, in this country, are often very great and sudden, and occasion colds, coughs, quinsies, rheumatisms, fevers, and other acute disorders. They are likewise forced to work hard, and often to carry burdens above their strength, which, by overstraining the vessels, occasion asthmas, ruptures, pleurisies, &c.

Those who labour without doors are often afflicted with intermitting fevers or agues, occasioned by the frequent vicissitudes of heat and cold, poor living, bad water, sitting or lying on the damp ground, evening dews, night air, &c. to which they are frequently exposed.

Such as bear heavy burdens, as porters, labourers, &c. are obliged to draw in the air with much greater force, and also to keep their lungs distended with more violence than is necessary for common respiration; by this means the tender vessels of the lungs are overstretched, and often burst, insomuch that a spitting of blood or fever ensues. Hippocrates mentions an instance to this purpose, of a man who, upon a wager, carried an ass; but was soon after seized with a fever, a vomiting of blood, and a rupture.

Carrying heavy burdens is generally the effect of mere laziness, which prompts people to do at once what should be done at twice. Sometimes it proceeds from vanity or emulation. Hence it is, that the strongest men are most commonly hurt by heavy burdens, hard labour, or feats of activity. It is rare to find one who boasts of his strength, with-

out a rupture, a spitting of blood, or some other disease, which he reaps as the fruit of his folly. One would imagine the daily instances we have of the fatal effects of carrying great weights, running, wrestling, and the like, would be sufficient to prevent such practices.

There are indeed some employments which necessarily require a great exertion of strength; as porters, blacksmiths, carpenters, &c. None ought to follow these but men of strong body; and they should never exert their strength to the utmost, nor work too long. When the muscles are violently strained, frequent rest is necessary, in order that they may recover their tone; without this, the strength and constitution will soon be worn out, and a premature old age be induced.

The erysipelas, or St Anthony's fire, is a disease very incident to the laborious. It is occasioned by whatever gives a sudden check to the perspiration, as drinking cold water when the body is warm, wet feet, keeping on wet clothes, sitting or lying on the damp ground, &c. It is impossible for those who labour without doors always to guard against these inconveniences; but it is known from experience, that their ill consequences might often be prevented by proper care.

The iliac passion, the colic, and other complaints of the bowels, are often occasioned by the same causes as the erysipelas; but they may likewise proceed from flatulent and indigestible food. Labourers generally eat unfermented bread, made of peas, beans, rye, and other windy ingredients. They also devour great quantities of unripe fruits, baked, stewed, or raw, with various kinds of roots and herbs, upon which they drink sour milk, stale small beer, or the like. Such a mixture cannot fail to fill the bowels with wind, and occasion diseases of those parts.

Inflammations, whitloes, and other diseases of the extremities, are likewise common among those who labour without doors. These diseases are often attributed to venom, or some kind of poison; but they generally proceed either from sudden heat after cold, or the contrary. When labourers, milk-maids, &c. come from the field, cold or wet, they run to the fire, and often plunge their hands in warm water; by which means the blood and other humours in those parts are suddenly expanded, and, the vessels not yielding

so quickly, a strangulation happens, and an inflammation or a mortification ensues.

When such persons come home cold, they ought to keep at a distance from the fire for some time, to wash their hands in cold water, and to rub them well with a dry cloth. It sometimes happens, that people are so benumbed with cold, as to be quite deprived of the use of their limbs. In this case the only remedy is to rub the parts affected with snow, or, where it cannot be had, with cold water. If they be held near the fire, or plunged into warm water, a mortification will generally ensue.

Labourers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous, that they often awake in a burning fever. Those ardent fevers which prove so fatal about the end of summer and beginning of autumn, are frequently occasioned by this means. When labourers leave off work, which they ought always to do during the heat of the day, they should go home, or at least get under some cover, where they may repose themselves in safety.

Many people follow their employments in the fields from morning till night, without eating any thing. This cannot fail to hurt their health. However homely their fare be, they ought to have it at regular times; and the harder they work, the more frequently they should eat. If the humours be not frequently replenished with fresh nourishment, they soon become putrid, and produce fevers of the very worst kind.

Many peasants are extremely careless with respect to what they eat or drink, and often, through mere indolence, use unwholesome food, when they might, for the same expence, have that which is wholesome. In some parts of Britain, the peasants are too careless even to take the trouble of dressing their own victuals. Such people would live upon one meal a-day in indolence, rather than labour, though it were to procure them the greatest affluence.

Fevers of a very bad kind are often occasioned among labourers by *poor living*. When the body is not sufficiently nourished, the humours become vitiated, and the solids weak; from whence the most fatal consequences ensue. *Poor living* is likewise productive of many of those cutaneous diseases so frequent among the lower class of people. It is remarkable, that cattle, when pinched in their food, are

generally affected with diseases of the skin, which seldom fail to disappear when they are put upon a good pasture. This shews how much a good state of the humours depends upon a sufficient quantity of proper nourishment.

Poverty not only occasions, but aggravates, many of the diseases of the laborious. Few of them have much foresight; and if they had, it is seldom in their power to save any thing. They are glad to make a shift to live from day to day; and when any disease overtakes them, they are miserable indeed. Here the godlike virtue of charity ought always to exert itself. To relieve the industrious poor in distress, is surely the most exalted act of religion and humanity. They alone who are witnesses of these scenes of calamity, can form a notion of what numbers perish in diseases for want of proper assistance, and even for want of the necessaries of life.

Labourers are often hurt by a foolish emulation, which prompts them to vie with one another, till they overheat themselves to such a degree as to occasion a fever, or even to drop down dead. Such as wantonly throw away their lives in this manner, deserve to be looked upon in no better light than self-murderers.

The office of a soldier, in time of war, may be ranked among the laborious employments. Soldiers suffer many hardships from the inclemency of seasons, long marches, bad provisions, hunger, watching, unwholesome climates, bad water, &c. These occasion fevers, fluxes, rheumatisms, and other fatal diseases, which generally do greater execution than the sword, especially when campaigns are continued too late in the season. A few weeks of cold rainy weather will often prove more fatal than an engagement.

Those who have the command of armies should take care that their soldiers be well clothed and well fed. They ought also to finish their campaigns in due season, and to provide their men with dry and well-aired winter quarters. These rules, taking care, at the same time, to keep the sick at a proper distance from those in health, would tend greatly to preserve the lives of the soldiery.*

* It is indeed to be regretted that soldiers suffer not less from indolence and intemperance in time of peace, than from hardships in time of war. If men are idle, they will be vicious. It would therefore be of great importance, could a scheme be formed for rendering the military, in times

Sailors may also be numbered among the laborious. They undergo great hardships from change of climate, the violence of the weather, hard labour, bad provisions, &c. Sailors are of so great importance both to the trade and safety of this kingdom, that too much pains can never be bestowed in pointing out the means of preserving their lives.

One great source of the diseases of sea-faring people is excess. When they get on shore, after having been long at sea, without regard to the climate, or their own constitutions, they plunge headlong into all manner of riot, and often persist till a fever puts an end to their lives. Thus intemperance, and not the climate, is often the cause why so many of our brave sailors die on foreign coasts. Such people ought not to live too low; but they will find moderation the best defence against fevers, and many other maladies.

Sailors, when on duty, cannot avoid sometimes getting wet. When this happens, they should change their clothes as soon as they are relieved, and take every method to restore the perspiration. They should not in this case make too free with spirits or other strong liquors, but should rather drink them diluted with warm water, and go immediately to bed, where a sound sleep and a gentle sweat will set all to rights.

But the health of sailors suffers most from unwholesome food. The constant use of salted provisions inflames their humours, and occasions the scurvy, and other obstinate maladies. It is no easy matter to prevent this disease in long voyages; yet we cannot help thinking that much might be done towards effecting so desirable an end, were due pains bestowed for that purpose. For example, various roots, greens, and fruits, might be kept a long time at

of peace, both more healthy and more useful. These desirable objects might, in our opinion, be obtained, by employing them for some hours every day, and advancing their pay accordingly. By this means, idleness, the mother of vice, might be prevented, the price of labour lowered, public works, as harbours, canals, turnpike roads, &c. might be made without hurting manufactures, and soldiers might be enabled to marry and bring up children. A scheme of this kind might easily be conducted so as not to depress the martial spirit, provided the men were only to work four or five hours every day, and always to work without doors: no soldier should be suffered to work too long, or to follow any sedentary employment. Sedentary employments render men weak and effeminate, quite unfit for the hardships of war: whereas working for a few hours every day without doors, would inure them to the weather, brace their nerves, and increase their strength and courage.

sea, as onions, potatoes, cabbages, lemons, oranges, tamarinds, apples, &c. When fruits cannot be kept, the juices of them, either fresh or fermented, may. With these all the drink, and even the food, of the ship's company ought to be acidulated in long voyages.

Stale bread and beer likewise contribute to vitiate the humours. Flour will keep for a long time on board, of which fresh bread might frequently be made. Malt too might be kept, and infused with boiling water at any time. This liquor, when drank even in form of wort, is very wholesome, and is found to be an antidote against the scurvy. Small wines and cider might likewise be plentifully laid in; and should they turn sour, they would still be useful as vinegar. Vinegar is a great antidote against diseases, and should be used by all travellers, especially at sea. It may either be mixed with the water they drink, or taken in their food.

Such animals as can be kept alive, ought likewise to be carried on board, as hens, ducks, pigs, &c. Fresh broths made of portable soup, and puddings made of peas or other vegetables, ought to be used plentifully. Many other things will readily occur to people conversant in these matters, which would tend to preserve the health of that brave and useful set of men.*

We have reason to believe, if due attention were paid to the diet, air, clothing, and above all things, to the cleanliness of sea-faring people, they would be the most healthy set of men in the world; but when these are neglected, the very reverse will happen.

The best *medical antidote* that we can recommend to sailors or soldiers, on foreign coasts, especially where dampness prevails, is the Peruvian bark. This will often prevent fevers, and other fatal diseases. About a drachm of it may be chewed every day; or if this should prove disagreeable, an ounce of bark, with half an ounce of orange-

* Our countryman the celebrated Captain Cook has shewn how far, by proper care and attention, the diseases formerly so fatal to seamen may be prevented. In a voyage of three years and eighteen days, during which he was exposed to every climate, from the 52° north to the 71° of south latitude, of one hundred and eighteen men composing the ship's company, he lost only one, who died of a *phthisis pulmonalis*. The principal means he used were, to preserve a strict attention to cleanliness, to procure abundance of vegetables and fresh provisions, especially good water, and to allow his people sufficient time for rest.

peel, and two drachms of snake-root coarsely powdered, may be infused for two or three days in an English quart of brandy, and half a wine glass of it taken twice or thrice a day, when the stomach is empty. This has been found to be an excellent antidote against fluxes, putrid, intermitting, and other fevers, in unhealthy climates. It is not material in what form this medicine is taken. It may either be infused in water, wine, or spirits, as recommended above, or made into an electuary with syrup of lemons, oranges, or the like.

The Sedentary.

Though nothing can be more contrary to the nature of man than a sedentary life, yet this class comprehends by far the greater part of the species. Almost the whole female world, and, in manufacturing countries, the major part of the males, may be reckoned sedentary.*

Agriculture, the first and most healthful of all employments, is now followed by few who are able to carry on any other business. But those who imagine that the culture of the earth is not sufficient to employ all its inhabitants, are greatly mistaken. An ancient Roman, we are told, could maintain his family from the produce of one acre of ground. So might a modern Briton, if he would be contented to live like a Roman. This shews what an immense increase of inhabitants Britain might admit of, and all of whom might live by the culture of the ground.

Agriculture is the great source of domestic riches. Where it is neglected, whatever wealth may be imported from abroad, poverty and misery will abound at home. Such is, and ever will be, the fluctuating state of trade and manufactures, that thousands of people may be in full employment to-day and in beggary to-morrow. This can never happen to those who cultivate the ground. They can eat

* The appellation of sedentary has generally been given only to the studious: we can see no reason, however, for restricting it to them alone. Many artificers may, with as much propriety, be denominated sedentary as the studious, with this particular disadvantage, that they are often obliged to sit in very awkward postures, which the studious need not do, unless they please.

the fruit of their labour, and can always by industry obtain, at least, the necessaries of life.

Though sedentary employments are necessary, yet there seems to be no reason why any person should be confined for life to these alone. Were such employments intermixed with the more active and laborious, they would never do hurt. It is constant confinement that ruins the health. A man may not be hurt by sitting five or six hours a-day; but if he is obliged to sit ten or twelve, he will soon become diseased.

But it is not want of exercise alone that hurts sedentary people: they likewise suffer from the confined air which they breathe. It is very common to see ten or a dozen tailors,* or stay-makers, for example, crowded into one small apartment, where there is hardly room for one person to breathe freely. In this situation they generally continue for many hours at a time, often with the addition of several candles, which tend likewise to waste the air, and render it less fit for respiration. Air that is breathed repeatedly becomes unfit for expanding the lungs. This is one cause of the phthisical coughs and other complaints of the breast, so incident to sedentary artificers.

Even the perspiration from a great number of persons pent up together, renders the air unwholesome. The danger from this quarter will be greatly increased, if any one of them happen to have bad lungs, or to be otherwise diseased. Those who sit near him, being forced to breathe the same air, can hardly fail to be infected. It would be a rare thing, however, to find a dozen of sedentary people all in good health. The danger of crowding them together must therefore be evident to every one.

Many of those who follow sedentary employments are constantly in a bending posture, as shoemakers, tailors, cutlers, &c. Such a situation is extremely hurtful. A bending posture obstructs all the vital motions, and of course must destroy the health. Accordingly we find such artificers

* A person of observation in that line of life told me, that most tailors die of consumptions; which he attributed chiefly to the unfavourable postures in which they sit, and the unwholesomeness of those places where their business is carried on. If more attention were not paid to profit than to the preservation of human lives, this evil might be easily remedied: but while masters only mind their own interest, nothing will be done for the safety of their servants.

generally complaining of indigestions, flatulencies, headachs, pains in the breast, &c.

The aliment in sedentary people, instead of being pushed forwards by an erect posture, and the action of the muscles, is in a manner confined in the bowels. Hence indigestions, costiveness, wind, and other hypochondriacal affections, the constant companions of the sedentary. Indeed none of the excretions can be duly performed where exercise is wanting; and when the matter which ought to be discharged in this way, is retained too long in the body, it must have bad effects, as it is again taken up into the mass of humours.

A bending posture is likewise hurtful to the lungs. When this organ is compressed, the air cannot have free access into all its parts, so as to expand them properly. Hence tubercles, adhesions, &c. are formed, which often end in consumptions. Besides, the proper action of the lungs being absolutely necessary for making good blood, when that organ fails, the humours soon become universally depraved, and the whole constitution goes to wreck. Being of a soft texture, and in continual action, their functions are easily obstructed by pressure.

The sedentary are not only hurt by pressure on the bowels, but also on the inferior extremities, which obstructs the circulation in these parts, and renders them weak and feeble. Thus tailors, shoemakers, &c. frequently lose the use of their legs altogether: besides, the blood and humours are, by stagnation, vitiated, and the perspiration is obstructed; whence proceed the scab, ulcerous sores, foul blotches, and other cutaneous diseases, so common among sedentary artificers.

A bad figure of body is a very common consequence of close application to sedentary employments. The spine, for example, by being continually bent, puts on a crooked shape, and generally remains so ever after. But a bad figure of body has already been observed to be hurtful to health, as the vital functions are thereby impeded.

A sedentary life seldom fails to occasion an universal relaxation of the solids. This is the great source from whence most of the diseases of sedentary people flow. The scrophula, consumption, hysterics, and nervous diseases, now so common, were very little known in this country before sedentary artificers became so numerous; and they are very

little known still among such of our people as follow active employments without doors, though in great towns at least two-thirds of the inhabitants are afflicted with them.

It is very difficult to remedy those evils, because many who have been accustomed to a sedentary life, like ricketty children, lose all inclination for exercise; we shall, however, throw out a few hints with respect to the most likely means for preserving the health of this useful set of people, which some of them, we hope, will be wise enough to take.

It has been already observed, that sedentary artificers are often hurt by their bending posture. They ought, therefore, to stand or sit as erect as the nature of their employments will permit. They should likewise change their posture frequently, and should never sit too long at a time, but leave off work, and walk, ride, run, or do any thing that will promote the vital functions.

Sedentary artificers are generally allowed too little time for exercise; yet, short as it is, they seldom employ it properly. A journeyman tailor or weaver, for example, instead of walking abroad for exercise and fresh air, at his hours of leisure, chuses often to spend them in a public-house, or in playing at some sedentary game, by which he generally loses both his time and his money.

The awkward postures in which many sedentary artificers work, seem rather to be the effect of custom than necessity. For example, a table might surely be contrived for ten or a dozen tailors to sit round, with liberty for their legs either to hang down or rest upon a footboard, as they should chuse. A place might likewise be cut out for each person, in such a manner that he might sit as conveniently for working as in the present mode of sitting cross-legged.

All sedentary artificers ought to pay the most religious regard to cleanliness. Both their situation and occupations render this highly necessary. Nothing would contribute more to preserve their health than a strict attention to it: and such of them as neglect it, not only run the hazard of losing health, but of becoming a nuisance to their neighbours.

Sedentary people ought to avoid food that is windy or hard of digestion, and should pay the strictest regard to sobriety. A person who works hard without doors will soon throw off a debauch; but one who sits, has by no means an

equal chance. Hence it often happens that sedentary people are seized with fevers after hard drinking. When such persons feel their spirits low, instead of running to the tavern for relief, they should ride or walk in the fields. This would remove the complaint more effectually than strong liquor, and would never hurt the constitution.

Instead of multiplying rules for preserving the health of the sedentary, we shall recommend to them the following general plan, viz. That every person who follows a sedentary employment, should cultivate a piece of ground with his own hands. This he might dig, plant, sow, and weed, at leisure hours, so as to make it both an exercise and amusement, while it produced many of the necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle.

Labouring the ground is every way conducive to health. It not only gives exercise to every part of the body, but the very smell of the earth and fresh herbs revives and cheers the spirits, whilst the perpetual prospect of something coming to maturity delights and entertains the mind. We are so formed as to be always pleased with somewhat in prospect, however distant, or however trivial; hence the happiness that most men feel in planting, sowing, building, &c. These seem to have been the chief employments of the more early ages; and when kings and conquerors cultivated the ground, there is reason to believe that they knew as well wherein true happiness consisted as we do.

It may seem romantic to recommend gardening to manufacturers in great towns; but observation proves that the plan is very practicable. In the town of Sheffield in Yorkshire, where the iron-manufacture is carried on, there is hardly a journeyman cutler who does not possess a piece of ground, which he cultivates as a garden. This practice has many salutary effects. It not only induces these people to take exercise without doors, but also to eat many greens, roots, &c. of their own growth, which they would never think of purchasing. There can be no reason why manufacturers in any other town in Great Britain should not follow the same plan. It is indeed to be regretted, that in such a place as London a plan of this kind is not practicable: yet, even there, sedentary artificers may find oppor-

tunities of taking air and exercise, if they chuse to embrace them.

Mechanics are too much inclined to crowd into great towns. The situation may have some advantages; but it has likewise many disadvantages. All mechanics who live in the country have it in their power to cultivate a piece of ground; which indeed most of them do. This not only gives them exercise, but enables them to live more comfortably. So far at least as my observation extends, mechanics who live in the country are far more happy than those in great towns. They enjoy better health, live in greater affluence, and seldom fail to rear a healthy and numerous offspring.

In a word, exercise without doors, in one shape or another, is absolutely necessary to health. Those who neglect it, though they may for a while drag out life, can hardly be said to enjoy it. Weak and effeminate, they languish for a few years, and soon drop into an untimely grave.

The Studious.

Intense thinking is so destructive to health, that few instances can be produced of studious persons who are strong and healthy. Hard study always implies a sedentary life; and when intense thinking is joined to the want of exercise, the consequences must be bad. We have frequently known even a few months of close application to study, ruin an excellent constitution, by inducing a train of nervous complaints which could never be removed. Man is evidently not formed for continual thought more than for perpetual action, and would be as soon worn out by the one as by the other.

So great is the power of the mind over the body, that by its influence, the whole vital motions may be accelerated or retarded to almost any degree. Thus cheerfulness and mirth quicken the circulation, and promote all the secretions; whereas sadness and profound thought never fail to retard them. Hence it would appear, that even a degree of thoughtlessness is necessary to health. Indeed, the perpetual thinker seldom enjoys either health or spirits; while the person who can hardly be said to think at all, generally enjoys both.

Perpetual thinkers, as they are called, seldom think long.

In a few years they generally become quite stupid, and exhibit a melancholy proof how readily the greatest blessings may be abused. Thinking, like every thing else, when carried to extreme, becomes a vice ; nor can any thing afford a greater proof of wisdom, than for a man frequently and seasonably to unbend his mind. This may generally be done by mixing in cheerful company, active diversions, or the like.

Instead of attempting to investigate the nature of that connexion which subsists between the mind and the body, or to inquire into the manner in which they mutually affect each other, we shall only mention those diseases to which the learned are more peculiarly liable, and endeavour to point out the means of avoiding them.

Studious persons are very subject to the gout. This painful disease in a great measure proceeds from indigestion, and an obstructed perspiration. It is impossible that the man who sits from morning till night should either digest his food, or have any of the secretions in due quantity. But when that matter which should be thrown off by the skin is retained in the body, and the humours are not duly prepared, diseases must ensue.

The studious are likewise very liable to the stone and gravel. Exercise greatly promotes both the secretion and discharge of urine ; consequently a sedentary life must have the contrary effect. Any one may be satisfied of this by observing, that he passes much more urine by day than in the night, and also when he walks or rides, than when he sits. The discharge of urine not only prevents the gravel and stone, but many other diseases.

The circulation in the liver being slow, obstructions in that organ can hardly fail to be the consequence of inactivity. Hence sedentary people are frequently afflicted with schirrous livers. But the proper secretion and discharge of the bile is so necessary a part of the animal economy, that where these are not duly performed, the health must soon be impaired. Jaundice, indigestion, loss of appetite, and a wasting of the whole body, seldom fail to be the consequences of a vitiated state of the liver, or obstructions of the bile.

Few diseases prove more fatal to the studious than consumptions of the lungs. It has already been observed, that this organ cannot be duly expanded in those who do not

take proper exercise; and where that is the case, obstructions and adhesions will ensue. Not only want of exercise, but the posture in which studious persons generally sit, is very hurtful to the lungs. Those who read or write much are ready to contract a habit of bending forwards, and often press with their breast upon a table or bench. This posture cannot fail to hurt the lungs.

The functions of the heart may likewise by this means be injured. I remember to have seen a man opened, whose pericardium adhered to the breast-bone in such a manner as to obstruct the motion of the heart, and occasion his death. The only probable cause that could be assigned for this singular symptom was, that the man, whose business was writing, used constantly to sit in a bending posture, with his breast upon the edge of a plain table.

No person can enjoy health who does not properly digest his food. But intense thinking and inactivity never fail to weaken the powers of digestion. Hence the humours become crude and vitiated, the solids weak and relaxed, and the whole constitution goes to ruin.

Long and intense thinking often occasions grievous headaches, which bring on vertigoes, apoplexies, palsies, and other fatal disorders. The best way to prevent these is, never to study too long at one time, and to keep the body regular, either by proper food, or taking frequently a little of some opening medicine.

Those who read or write much are often afflicted with sore eyes. Studying by candle light is peculiarly hurtful to the sight. This ought to be practised as seldom as possible. When it is unavoidable, the eyes should be shaded, and the head should not be held too low. When the eyes are weak or painful, they should be bathed every night and morning in cold water, to which a little brandy may be added.

It has already been observed, that the excretions are very defective in the studious. The dropsy is often occasioned by the retention of those humours which ought to be carried off in this way. Any person may observe that sitting makes the legs swell, and that this goes off by exercise, which clearly points out the method of prevention.

Fevers, especially of the nervous kind, are often the effect of study. Nothing affects the nerves so much as intense

thought. It in a manner unhinges the whole human frame, and not only hurts the vital motions, but disorders the mind itself. Hence a delirium, melancholy, and even madness, are often the effect of close application to study. In fine, there is no disease which can proceed either from a bad state of the humours, a defect of the usual secretions, or a debility of the nervous system, which may not be induced by intense thinking.

But the most afflicting of all the diseases which attack the studious is the hypochondriac. This disease seldom fails to be the companion of deep thought. It may rather be called a complication of maladies than a single one. To what a wretched condition are the best of men often reduced by it! Their strength and appetite fail; a perpetual gloom hangs over their minds; they live in the constant dread of death, and are continually in search of relief from medicine, where alas! it is not to be found. Those who labour under this disorder, though they are often made the subject of ridicule, justly claim our highest sympathy and compassion.

Hardly any thing can be more preposterous than for a person to make study his sole business. A mere student is seldom an useful member of society. He often neglects the most important duties of life, in order to pursue studies of a very trifling nature. Indeed it rarely happens, that any useful invention is the effect of mere study. The farther men dive into profound researches, they generally deviate the more from common sense, and too often lose sight of it altogether. Profound speculations, instead of making men wiser or better, generally render them absolute sceptics, and overwhelm them with doubt and uncertainty. All that is necessary for man to know, in order to be happy, is easily obtained; and the rest, like the forbidden fruit, serves only to increase his misery.

Studious persons, in order to relieve their minds, must not only discontinue to read and write, but engage in some employment or diversion that will so far occupy the thought as to make them forget the business of the closet. A solitary ride or walk are so far from relaxing the mind, that they rather encourage thought. Nothing can divert the mind when it gets into a train of serious thinking, but attention to subjects of a more trivial nature. These prove a kind of play to the mind, and consequently relieve it.

Learned men often contract a contempt for what they call trifling company. They are ashamed to be seen with any but philosophers. This, however, is no proof of their being philosophers themselves. No man deserves that name who is ashamed to unbend his mind, by associating with the cheerful and gay. Even the society of children will relieve the mind, and expel the gloom which application to study is too apt to occasion.

As studious people are necessarily much within doors, they should make choice of a large and well-aired place for study. This would not only prevent the bad effects which attend confined air, but would cheer the spirits, and have a most happy influence both on the body and mind. It is said of Euripides the tragedian, that he used to retire to a dark cave to compose his tragedies; and of Demosthenes the Grecian orator, that he chose a place for study where nothing could be either heard or seen. With all deference to such venerable names, we cannot help condemning their taste. A man may surely think to as good purpose in an elegant apartment as in a cave; and may have as happy conceptions where the all-cheering rays of the sun render the air wholesome, as in places where they never enter.

Those who read or write much should be very attentive to their posture. They ought to sit and stand by turns, always keeping as nearly in an erect posture as possible. Those who dictate may do it walking. It has an excellent effect frequently to read or speak aloud. This not only exercises the lungs, but almost the whole body. Hence studious people are greatly benefited by delivering discourses in public. Public speakers, indeed, sometimes hurt themselves by overacting their part; but this is their own fault. The martyr to mere vociferation merits not our sympathy.

The morning has, by all medical writers, been reckoned the best time for study. It is so. But it is also the most proper season for exercise, while the stomach is empty, and the spirits refreshed with sleep. Studious people should therefore sometimes spend the morning in walking, riding, or some manly diversions without doors. This would make them return to study with greater alacrity, and would be of more service than twice the time after their spirits are worn out with fatigue. It is not sufficient to

take diversion only when we can think no longer. Every studious person should make it a part of his business, and should let nothing interrupt his hours of recreation more than those of study.

Music has a very happy effect in relieving the mind when fatigued with study. It would be well if every studious person were so far acquainted with that science as to amuse himself after severe thought, by playing such airs as have a tendency to raise the spirits, and inspire cheerfulness and good humour.

It is a reproach to learning, that any of her votaries, to relieve the mind after study, should betake themselves to the use of strong liquors. This indeed is a remedy; but it is a desperate one, and always proves destructive. Would such persons, when their spirits are low, get on horseback, and ride ten or a dozen miles, they would find it a more effectual remedy than any cordial medicine in the apothecary's shop, or all the strong liquors in the world.

The following is my plan, and I cannot recommend a better to others. When my mind is fatigued with study, or other serious business, I mount my horse, and ride ten or twelve miles into the country, where I spend a day, and sometimes two, with a cheerful friend; after which I never fail to return to town with new vigour, and to pursue my studies or business with fresh alacrity.

It is much to be regretted, that learned men, while in health, pay so little regard to these things! There is not any thing more common than to see a miserable object overrun with nervous diseases, bathing, walking, riding, and, in a word, doing every thing for health, after it is gone; yet, if any one had recommended these things to him by way of prevention, the advice would in all probability have been treated with contempt, or at least with neglect. Such is the weakness and folly of mankind, and such the want of foresight, even in those who ought to be wiser than others.

With regard to the diet of the studious, we see no reason why they should abstain from any kind of food that is wholesome, provided they use it in moderation. They ought however to be sparing in the use of every thing that is windy, rancid, or hard of digestion. Their suppers should always be light, or taken soon in the evening. Their drink may be water, fine malt liquor, not too strong, good cider, wine and

water, or, if troubled with acidities, water mixed with a little brandy, rum, or any other genuine spirit.

We shall only observe, with regard to those kinds of exercise which are most proper for the studious, that they should not be too violent, nor ever carried to the degree of excessive fatigue. They ought likewise to be frequently varied, so as to give action to all the different parts of the body; and should, as often as possible, be taken in the open air. In general, riding on horseback, walking, working in a garden, or playing at some active diversions, are the best.

We would likewise recommend the use of the cold bath to the studious. It will, in some measure, supply the place of exercise, and should not be neglected by persons of a relaxed habit, especially in the warm season.

No person ought either to take violent exercise, or study, immediately after a full meal.

In the above remarks on the usual diseases of the studious, my chief object was to warn them of the evil consequences of *painful* and *intense thinking*. But I should be sorry to damp the ardour of their literary pursuits, which are injurious to health only when continued with incessant toil, at late hours, and without due intervals of rest, refreshment, relaxation, and exercise. It is not thought, says the medical poet, 'tis painful thinking, that corrodes our clay. I deemed it necessary to be more explicit on this head, in consequence of having found that my former cautions to men of genius and science had been understood in too rigorous a sense, as discouraging the manly exertions of real talents.

CHAP. III.

OF ALIMENT.

Unwholesome food, and irregularities of diet, occasion many diseases. There is no doubt but the whole constitution of body may be changed by diet alone. The fluids may be thereby attenuated or condensed, rendered mild or acrimonious, coagulated or diluted, to almost any degree. Nor are its effects upon the solids less considerable. They

may be braced or relaxed, have their sensibility, motions, &c. greatly increased or diminished, by different kinds of aliment. A very small attention to these things will be sufficient to shew, how much the preservation of health depends upon a proper regimen of the diet.

Nor is an attention to diet necessary for the preservation of health only; it is likewise of importance to the cure of diseases. Every intention in the cure of many diseases, may be answered by diet alone. Its effects, indeed, are not always so quick as those of medicine, but they are generally more lasting: besides, it is neither so disagreeable to the patient, nor so dangerous a medicine, and is always more easily obtained.

Our intention here is not to inquire minutely into the nature and properties of the various kinds of aliment in use among mankind; nor to show their effects upon the different constitutions of the human body; but to mark some of the most pernicious errors which people are apt to fall into, with respect both to the quantity and quality of their food, and to point out their influence upon health.

It is not indeed an easy matter to ascertain the exact quantity of food proper for every age, sex, and constitution; but a scrupulous nicety here is by no means necessary. The best rule is to avoid all extremes. Mankind were never intended to weigh and measure their food. Nature teaches every creature when it has enough; and the calls of thirst and hunger are sufficient to inform them when more is necessary.

Though *moderation* is the chief rule with regard to the quantity, yet the quality of food merits a farther consideration. There are many ways by which provisions may be rendered unwholesome. Bad seasons may either prevent the ripening of grain, or damage it afterwards. These, indeed, are acts of Providence, and we must submit to them; but surely no punishment can be too severe for those who suffer provisions to spoil by hoarding them, on purpose to raise the price, or who promote their own interest by adulterating the necessaries of life.*

* The poor, indeed, are generally the first who suffer by unsound provisions; but the lives of the labouring poor are of great importance to the state; beisdes, diseases occasioned by unwholesome food often prove infectious, by which means they reach people in every station. It is therefore the interest of all to take care that no spoiled provisions of any kind be exposed to sale.

Animal as well as vegetable food may be rendered unwholesome, by being kept too long. All animal substances have a constant tendency to putrefaction; and when that has proceeded too far, they not only become offensive to the senses, but hurtful to health. Diseased animals, and such as die of themselves, ought never to be eaten. It is a common practice, however, in some grazing countries, for servants and poor people to eat such animals as die of any disease, or are killed by accident. Poverty, indeed, may oblige people to do this; but they had better eat a smaller quantity of what is sound and wholesome: it would both afford better nourishment, and be attended with less danger.

The injunction given to the Jews, not to eat any creature which died of itself, seems to have a strict regard to health; and ought to be observed by Christians as well as Jews. Animals never die themselves without some previous disease; but how a diseased animal should be wholesome food, is inconceivable: even those which die by accident must be hurtful, as their blood is mixed with the flesh, and soon turns putrid.

Animals which feed grossly, as tame ducks, hogs, &c. are neither so easily digested, nor afford such wholesome nourishment as others. No animal can be wholesome which does not take sufficient exercise. Most of our stalled cattle are crammed with gross food, but not allowed exercise nor free air; by which means they indeed grow fat, but their juices, not being properly prepared or assimilated, remain crude, and occasion indigestions, gross humours, and oppression of the spirits, in those who feed upon them.

Animals are often rendered unwholesome by being overheated. Excessive heat causes a fever, exalts the animal salts, and mixes the blood so intimately with the flesh, that it cannot be separated. For this reason, butchers should be severely punished who over-drive their cattle. No person would chuse to eat the flesh of an animal which had died in a high fever; yet that is the case with all over-drove cattle; and the fever is often raised even to the degree of madness.

But this is not the only way by which butchers render meat unwholesome. The abominable custom of filling the cellular membrane of animals with air, in order to make them

appear fat, is every day practised. This not only spoils the meat, and renders it unfit for keeping, but is such a dirty trick, that the very idea of it is sufficient to disgust a person of any delicacy at every thing which comes from the shambles. Who can bear the thought of eating meat which has been blown up with air from the lungs of a dirty fellow, perhaps labouring under the very worst of diseases?

Butchers have likewise a method of filling the cellular membranes of animals with blood. This makes the meat seem fatter, and likewise weigh more, but is notwithstanding a very pernicious custom, as it both renders the meat unwholesome and unfit for keeping. I seldom see a piece of meat from the shambles, where the blood is not diffused through the cellular texture. I shall not say that this is always the effect of design; but I am certain it is not the case with animals that are killed for domestic use, and properly blooded. Veal seems to be most frequently spoilt in this way. Perhaps that may in some measure be owing to the practice of carrying calves from a great distance to market, by which means their tender flesh is bruised, and many of their vessels burst.

No people in the world eat such quantities of salted animal food as the English, which is one reason why they are so generally tainted with the scurvy, and its numerous train of consequences, indigestion, low spirits, hypochondriacism, &c. Animal food was surely designed for man, and, with a proper mixture of vegetables, it will be found the most wholesome; but to gorge beef, mutton, pork, fish, and fowl, twice or thrice a-day, is certainly too much. All who value health ought to be contented with making one meal of flesh in the twenty-four hours, and this ought to consist of one kind only.

The most obstinate scurvy has often been cured by a vegetable diet; nay, milk alone will frequently do more in that disease than any medicine. Hence it is evident, that if vegetables and milk were more used in diet, we should have less scurvy, and likewise fewer putrid and inflammatory fevers. Fresh vegetables, indeed, come to be daily more used in diet; this laudable practice, we hope, will continue to gain ground. Our aliment ought neither to be too moist nor too dry. Moist aliment relaxes the solids, and renders the body feeble. Thus we see females, who live much on

tea and other watery diet, generally become weak, and unable to digest solid food: hence proceed hysterics, and all their dreadful consequences. On the other hand, food that is too dry, renders the solids in a manner rigid, and the humours viscid, which disposes the body to inflammatory fevers, scurvies, and the like.

Much has been said on the ill effects of tea in diet. They are, no doubt, numerous; but they proceed rather from the imprudent use of it, than from any bad qualities in the tea itself. Tea is now the universal breakfast in this part of the world; but the morning is surely the most improper time of the day for drinking it. Most delicate persons, who, by the bye, are the greatest tea-drinkers, cannot eat any thing in the morning. If such persons, after fasting ten or twelve hours, drink four or five cups of green tea without eating almost any bread, it must hurt them. Good tea, taken in a moderate quantity, not too strong nor too hot, nor drank upon an empty stomach, will seldom do harm; but if it be bad, which is often the case, or substituted in the room of solid food, it must have many ill effects.

The arts of cookery render many things unwholesome, which are not so in their own nature. By jumbling together a number of different ingredients in order to make a poignant sauce, or rich soup, the composition proves almost a poison. All high seasoning, pickles, &c. are only incentives to luxury, and never fail to hurt the stomach. It were well for mankind, if cookery, as an art, were entirely prohibited.

Plain roasting or boiling is all that the stomach requires. These alone are sufficient for people in health, and the sick have still less need of a cook.

The liquid part of our aliment likewise claims our attention. Water is not only the basis of most liquors, but also composes a great part of our solid food. Good water must therefore be of the greatest importance in diet. The best water is that which is most pure, and free from any mixture of foreign bodies. Water takes up parts of most bodies with which it comes into contact; by this means it is often impregnated with metals or minerals of a hurtful or poisonous nature. Hence the inhabitants of some hilly countries have peculiar diseases, which in all probability proceed from the water. Thus the people who live near the Alps in Switzerland, and the inhabitants of the Peak of Derby in England,

have large tumours or wens on their necks. This disease is generally imputed to the snow water; but there is more reason to believe it is owing to the minerals in the mountains through which the waters pass.

When water is impregnated with foreign bodies, it generally appears by its weight, colour, taste, smell, heat, or some other sensible quality. Our business, therefore, is to chuse such water, for common use, as is lightest, and without any particular colour, taste, or smell. In most places of Britain the inhabitants have it in their power to make choice of their water; and few things would contribute more to health than a due attention to this article. But mere indolence often induces people to make use of the water that is nearest to them, without considering its qualities.

Before water is brought into great towns, the strictest attention ought to be paid to its qualities, as many diseases may be occasioned or aggravated by bad water; and when once it has been procured at a great expense, people are unwilling to give it up.

The common method of rendering water clear by filtration, or soft by exposing it to the sun and air, &c. are so generally known that it is unnecessary to spend time in explaining them. We shall only, in general, advise all to avoid waters which stagnate long in small lakes, ponds, or the like, as such waters often become putrid by the corruption of animal and vegetable bodies with which they abound. Even cattle frequently suffer by drinking, in dry seasons, water which has stood long in small reservoirs, without being supplied by springs, or freshened with showers. All wells ought to be kept clean, and to have a free communication with the air.

As fermented liquors, notwithstanding they have been exclaimed against by many writers, still continue to be the common drink of almost every person who can afford them; we shall rather endeavour to assist people in the choice of these liquors, than pretend to condemn what custom has so firmly established. It is not the moderate use of sound fermented liquors which hurts mankind; it is excess, and using such as are ill-prepared or vitiated.

Fermented liquors, which are too strong, hurt digestion; and the body is so far from being strengthened by them, that it is weakened and relaxed. Many imagine that hard

labour could not be supported without drinking strong liquors; this is a very erroneous notion. Men who never taste strong liquors are not only able to endure more fatigue, but also live much longer, than those who use them daily. But, suppose strong liquors did enable a man to do more work, they must nevertheless waste the powers of life, and occasion premature old age. They keep up a constant fever, which exhausts the spirits, inflames the blood, and disposes the body to numberless diseases.

But fermented liquors may be too weak as well as too strong: when that is the case, they must either be drunk new, or they become sour and dead: when such liquors are drunk new, the fermentation not being over, they generate air in the bowels, and occasion flatulencies; and when kept till stale, they turn sour on the stomach, and hurt digestion. For this reason all malt liquors, ciders, &c. ought to be of such strength as to keep till they be ripe, and then they should be used. When such liquors are kept too long, though they should not become sour, yet they generally contract a hardness which renders them unwholesome.

All families, who can, ought to prepare their own liquors. Since preparing and vending of liquors became one of the most general branches of business, every method has been tried to adulterate them. The great object both to the makers and venders of liquor is, to render it intoxicating, and give it the appearance of age. But it is well known that this may be done by other ingredients than those which ought to be used for making it strong. It would be imprudent even to name those things which are daily made use of to render liquors heady. Suffice it to say, that the practice is very common, and that all ingredients used for this purpose are of a narcotic or stupefactive quality. But as all opiates are poisonous, it is easy to see what must be the consequence of their general use. Though they do not kill suddenly, yet they hurt the nerves, relax and weaken the stomach, and spoil the digestion.

Were fermented liquors faithfully prepared, kept to a proper age, and used in moderation, they would prove real blessings to mankind. But, while they are ill-prepared, various ways adulterated, and taken to excess, they must have many pernicious effects.

We would recommend it to families, not only to prepare

their own liquors, but likewise their bread. Bread is so necessary a part of diet, that too much care cannot be bestowed in order to have it sound and wholesome. For this purpose, it is not only necessary that it be made of good grain, but likewise properly prepared, and kept free from all unwholesome ingredients. This, however, we have reason to believe, is not always the case with bread prepared by those who make a trade of vending it. Their object is rather to please the eye, than to consult the health. The best bread is that which is neither too coarse nor too fine; well fermented, and made of wheat flour, or rather of wheat and rye mixed together.

To specify the different kinds of aliment, to explain their nature and properties, and to point out their effects in different constitutions, would far exceed the limits of our design. Instead of a detail of this kind, which would not be generally understood, and of course little attended to, we shall only mention the following easy rules with respect to the choice of aliment.

Persons whose solids are weak and relaxed, ought to avoid all viscid food, and such things as are hard of digestion. Their diet, however, ought to be nourishing; and they should take sufficient exercise in the open air.

Such as abound with blood should be sparing in the use of every thing that is highly nourishing, as fat meat, rich wines, strong ale, and such like. Their food should consist chiefly of bread and other vegetable substances; and their drink ought to be water, whey, or small beer.

Fat people should not eat freely of oily nourishing diet. They ought frequently to use radish, garlic, spices, or such things as are heating, and promote perspiration and urine. Their drink should be water, coffee, tea, or the like; and they ought to take much exercise and little sleep.

Those who are too lean must follow an opposite course.

Such as are troubled with acidities, or whose food is apt to sour on the stomach, should live much on animal food; and those who are afflicted with hot alkaline eructations, ought to use a diet consisting chiefly of acid vegetables.

People who are affected with the gout, low spirits, hypochondriac or hysteric disorders, ought to avoid all flatulent food, every thing that is viscid, or hard of digestion, all salted or smoke-dried provisions, and whatever is austere, acid,

or apt to turn sour on the stomach. Their food should be light, spare, cool, and of an opening nature.

The diet ought not only to be suited to the age and constitution, but also to the manner of life: a sedentary or studious person should live more sparingly than one who labours hard without doors. Many kinds of food will nourish a peasant very well, which would be almost indigestible to a citizen; and the latter will live upon a diet on which the former would starve.

Diet ought not to be too uniform. The constant use of one kind of food might have some bad effects. Nature teaches us this, by the great variety of aliment which she has provided for man, and likewise by giving him an appetite for different kinds of food.

Those who labour under any particular disease, ought to avoid such aliments as have a tendency to increase it: for example, a gouty person should not indulge in rich wines, strong soups, or gravies, and should avoid all acid. One who is troubled with the gravel ought to shun all austere and astringent aliments; and those who are scorbutic should be sparing in the use of salted provisions, &c.

In the first period of life, our food ought to be light, but nourishing, and frequently taken. Food that is solid, with a sufficient degree of tenacity, is most proper for the state of manhood. The diet suited to the last period of life, when nature is upon the decline, approaches nearly to that of the first. It should be lighter and more succulent than that of vigorous age, and likewise more frequently taken.

It is not only necessary for health that our diet be wholesome, but also that it be taken at regular periods. Some imagine long fasting will atone for excess; but this, instead of mending the matter, generally makes it worse. When the stomach and intestines are over-distended with food, they lose their proper tone; and by long fasting, they become weak, and inflated with wind. Thus, either gluttony or fasting destroys the power of digestion.

The frequent repetition of aliment is not only necessary for repairing the continual waste of our bodies, but likewise to keep the fluids sound and sweet. Our humours, even in the most healthy state, have a constant tendency to putrefaction, which can only be prevented by frequent supplies of fresh nourishment; when that is wanting too long, the pu-

trefaction often proceeds so far as to occasion very dangerous fevers. From hence we may learn the necessity of regular meals. No person can enjoy a good state of health, whose vessels are either frequently overcharged, or the humours long deprived of fresh supplies of chyle.

Long fasting is extremely hurtful to young people; it not only vitiates their humours, but prevents their growth. Nor is it less injurious to the aged. Most persons, in the decline of life, are afflicted with wind; this complaint is not only increased, but even rendered dangerous, and often fatal, by long fasting. Old people, when their stomachs are empty, are frequently seized with giddiness, headaches, and faintness. These complaints may generally be removed by a piece of bread and a glass of wine, or taking any other solid food; which plainly points out the method of preventing them.

It is more than probable, that many of the sudden deaths, which happen in the advanced periods of life, are occasioned by fasting too long, as it exhausts the spirits, and fills the bowels with wind: we would therefore advise people in the decline of life, never to allow their stomachs to be too long empty. Many people take nothing but a few cups of tea and a little bread, from nine o'clock at night till two or three next afternoon. Such may be said to fast almost three-fourths of their time. This can hardly fail to ruin the appetite, vitiate the humours, and fill the bowels with wind; all which might be prevented by a solid breakfast.

It is a very common practice to eat a light breakfast and a heavy supper. This custom ought to be reversed. When people sup late, their supper should be very light; but the breakfast ought always to be solid. If any one eats a light supper, goes soon to bed, and rises betimes in the morning, he will be sure to find an appetite for his breakfast, and he may freely indulge it.

The strong and healthy do not indeed suffer so much from fasting as the weak and delicate; but they run great hazard from its opposite, viz. repletion. Many diseases, especially fevers, are the effect of a plethora, or too great fulness of the vessels. Strong people, in high health, have generally a great quantity of blood and other humours. When these are suddenly increased, by an overcharge of rich and nou-

rishing diet, the vessels become too much distended, and obstructions and inflammations ensue. Hence so many people are seized with inflammatory and eruptive fevers, apoplexies, &c. after a feast or debauch.

All great and sudden changes in diet are dangerous. What the stomach has been long accustomed to digest, though less wholesome, will agree better with it than food of a more salutary nature to which it has not been used. When therefore a change becomes necessary, it ought always to be made gradually; a sudden transition from a poor and low to a rich and luxurious diet, or the contrary, might so disturb the functions of the body, as to endanger health, or even to occasion death itself.

When we recommend regularity in diet, we would not be understood as condemning every small deviation from it. It is next to impossible for people at all times to avoid some degree of excess, and living too much by rule might make even the smallest deviation dangerous. It may therefore be prudent to vary a little, sometimes taking more, sometimes less, than the usual quantity of meat and drink, provided always that a due regard be had to moderation.

The details which some writers have entered into respecting the supposed qualities of every article of food and drink, as well as the proper quantities of each, appear to me just as trifling as the minuteness of the physician who inserted in his prescription how many grains of salt should be eaten with an egg. Every man's experience of what he has found to agree or disagree with him, is a much more unerring guide than whimsical calculations of the difference between the mucilage of a carrot and a parsnip, or between the jelly contained in a leg and a shoulder of mutton. But while I point out the folly of extreme solicitude in such matters, I am far from advising people to eat and drink, without any choice or restraint, whatever falls in their way. This would be inconsistent with the rules I have already laid down. Rational enjoyment of the gifts of nature, is the happy medium between boundless indulgence and frivolous or unnecessary self-denial.

CHAP. IV.

OF AIR.

UNWHOLESOME air is a very common cause of diseases. Few are aware of the danger arising from it. People generally pay some attention to what they eat or drink, but seldom regard what goes into the the lungs, though the latter proves often more suddenly fatal than the former.

Air, as well as water, takes up parts of most bodies with which it comes into contact, and is also so replenished with those of a noxious quality, as to occasion immediate death. But such violent effects seldom happen, as people are generally on their guard against them. The less perceptible influences of bad air prove more generally hurtful to mankind; we shall therefore endeavour to point out some of these, and to show whence the danger chiefly arises.

Air may become noxious many ways. Whatever greatly alters its degrees of heat, cold, moisture, &c. renders it unwholesome: for example, that which is too hot dissipates the watery parts of the blood, exalts the bile, and renders the whole humours adust and thick. Hence proceed bilious and inflammatory fevers, cholera morbus, &c. Very cold air obstructs the perspiration, constringes the solids, and condenses the fluids. It occasions rheumatisms, coughs, and catarrhs, with other diseases of the throat and breast. Air that is too moist destroys the elasticity or spring of the solids, induces phlegmatic or lax constitutions, and disposes the body to agues, or intermitting fevers, dropsies, &c.

Wherever great numbers of people are crowded into one place, if the air has not a free circulation, it soon becomes unwholesome. Hence it is that delicate persons are so apt to turn sick or faint in crowded churches, assemblies, or any place where the air is injured by breathing, fires, candles, or the like.

In great cities so many things tend to contaminate the air, that it is no wonder it proves so fatal to the inhabitants. The air in cities is not only breathed repeatedly over, but is likewise loaded with sulphur, smoke, and other exhalations, besides the vapours continually arising from innumerable putrid substances, as dunghills, slaughter-houses, &c. All

possible care should be taken to keep the streets of large towns open and wide, that the air may have a free current through them. They ought likewise to be kept very clean. Nothing tends more to pollute and contaminate the air of a city than dirty streets.

It is very common in this country to have church-yards in the middle of populous cities. Whether this be the effect of ancient superstition, or owing to the increase of such towns, is a matter of no consequence. Whatever gave rise to the custom, it is a bad one. It is habit alone which reconciles us to these things; by means of which the most ridiculous, nay, pernicious customs, often become sacred. Certain it is, that thousands of putrid carcases, so near the surface of the earth, in a place where the air is confined, cannot fail to taint it; and that such air, when breathed into the lungs, must occasion diseases.*

Burying within churches is a practice still more detestable. The air in churches is seldom good, and the effluvia from putrid carcases must render it still worse. Churches are commonly old buildings with arched roofs. They are seldom open above once a-week, are never ventilated by fires nor open windows, and rarely kept clean. This occasions that damp, musty, unwholesome smell, which one feels upon entering a church, and renders it a very unsafe place for the weak and valetudinary. These inconveniences might, in a great measure, be obviated, by prohibiting all persons from burying within churches, by keeping them clean, and permitting a stream of fresh air to pass frequently through them, by opening opposite doors and windows.†

Wherever air stagnates long, it becomes unwholesome. Hence the unhappy persons confined in jails, not only contract malignant fevers themselves, but often communicate them to others. Nor are many of the holes, for we cannot call them houses, possessed by the poor in great towns, much better than jails. These low dirty habitations are the very lurking-places of bad air and contagious diseases. Such

* In most eastern countries it was customary to bury the dead at some distance from any town. As this practice obtained among the Jews, the Greeks, and also the Romans, it is strange that the western parts of Europe should not have followed their example in a custom so truly laudable.

† One cannot pass through a large church or cathedral, even in summer, without feeling quite chilly.

as live in them seldom enjoy good health; and their children commonly die young. In the choice of a house, those who have it in their power ought always to pay the greatest attention to open free air.

The various methods which luxury has invented to make houses close and warm, contribute not a little to render them unwholesome. No house can be wholesome unless the air has a free passage through it. For which reason, houses ought daily to be ventilated, by opening opposite windows, and admitting a current of fresh air into every room. Beds, instead of being made up as soon as people rise out of them, ought to be turned down, and exposed to the fresh air from the open windows through the day. This would expel any noxious vapour, and could not fail to promote the health of the inhabitants.

In hospitals, jails, ships, &c. where that cannot be conveniently done, ventilators should be used. The method of expelling foul, and introducing fresh air, by means of ventilators, is a most salutary invention, and is indeed the most useful of all our modern medical improvements. It is capable of universal application, and is fraught with numerous advantages, both to those in health and sickness. In all places, where numbers of people are crowded together, ventilation becomes absolutely necessary.

Air which stagnates in mines, wells, cellars, &c. is extremely noxious. That kind of air is to be avoided as the most deadly poison. It often kills almost as quickly as lightening. For this reason people should be very cautious in opening cellars that have been long shut, or going down into deep wells or pits, especially if they have been kept close covered.*

Many people who have splendid houses, chuse to sleep in small apartments. This conduct is very imprudent. A bed-chamber ought always to be well aired, as it is generally occupied in the night only, when all doors and windows are shut. If a fire be kept in it, the danger from a small room becomes still greater. Numbers have been

* We have daily accounts of persons who lose their lives by going down into deep wells and other places where the air stagnates; all these accidents might be prevented by only letting down a lighted candle before them, and stopping when they perceive it go out; yet this precaution, simple as it is, is seldom used.

stifled when asleep by a fire in a small apartment, which is always hurtful.

Those who are obliged, on account of business, to spend the day in close towns, ought, if possible, to sleep in the country. Breathing free air in the night will, in some measure, make up for the want of it through the day. This practice would have a greater effect in preserving the health of citizens than is commonly imagined.

Delicate persons ought, as much as possible, to avoid the air of great towns. It is peculiarly hurtful to the asthmatic and consumptive. Such persons should avoid cities as they would the plague. The hypochondriac are likewise much hurt by it. I have often seen persons so much afflicted with this malady while in town, that it seemed impossible for them to live, who, upon being removed to the country, were immediately relieved. The same observation holds with regard to nervous and hysteric women. Many people, indeed, have it not in their power to change their situation in quest of better air. All we can say to such persons is, that they should go as often abroad in the open air as they can, that they should admit fresh air frequently into their houses, and take care to keep them very clean.

It was necessary in former times, for safety, to surround cities, colleges, and even single houses, with high walls. These, by obstructing the free current of air, never fail to render such places damp and unwholesome. As such walls are now, in most parts of this country, become useless, they ought to be pulled down, and every method taken to admit a free passage to the air. Proper attention to AIR and CLEANLINESS would tend more to preserve the health of mankind than all the prescriptions of the Faculty.

Surrounding houses too closely with plantations or thick woods, likewise tends to render the air unwholesome. Wood not only obstructs the free current of air, but sends forth great quantities of moist exhalation, which render it constantly damp. Wood is very agreeable at a proper distance from a house, but should never be planted too near it, especially in a flat country. Many of the gentlemen's seats in England are rendered very unwholesome from the great quantity of wood which surrounds them.

Houses situated in low marshy countries, or near large lakes of stagnating water, are likewise unwholesome. Waters

which stagnate not only render the air damp, but load it with putrid exhalations, which produce the most dangerous and fatal diseases. Those who are obliged to inhabit marshy countries, ought to choose the driest situations they can find, to live generously, and pay the strictest regard to cleanliness.

If fresh air be necessary for those in health, it is still more so for the sick, who often lose their lives for want of it. The notion that sick people must be kept very hot, is so common, that one can hardly enter the chamber where a patient lies, without being ready to faint, by reason of the hot suffocating smell. How this must affect the sick, any one may judge. No medicine is so beneficial to the sick as fresh air. It is the most reviving of all cordials, if it be administered with prudence. We are not, however, to throw open doors and windows at random upon the sick. Fresh air is to be let into the chamber gradually, and, if possible, by opening the windows of some other apartment.

The air of a sick person's chamber may be greatly freshened, and the patient much revived, by sprinkling the floor, bed, &c. frequently, with vinegar, juice of lemon, or any other strong vegetable acid.

In places where numbers of sick are crowded into the same house, or, which is often the case, into the same apartment, the frequent admission of fresh air becomes absolutely necessary. Infirmaries, hospitals, &c. are often rendered so noxious, for want of proper ventilation, that the sick run more hazard from them than from the disease. This is particularly the case when putrid fevers, dysenteries, and other infectious diseases prevail.

Physicians, surgeons, and others who attend hospitals, ought, for their own safety, to take care that they be properly ventilated. Such persons as are obliged to spend most of their time amongst the sick, run great hazard of being themselves infected when the air is bad. All hospitals and places of reception for the sick, ought to have an open situation, at some distance from any great town; and such patients as labour under any infectious disease, ought never to be suffered to come near the rest.*

* A year seldom passes that we do not hear of some hospital physician or surgeon having lost his life by an hospital fever caught from his patients. For this they have themselves alone to blame. Their patients are either in an improper situation, or they are careless with regard to their own conduct.

Great attention has of late years been paid to selecting proper sites in erecting hospitals, as well as to keep them properly ventilated; but the interment of the dead in the middle of crowded towns is not done away. The ancients never interred their dead in temples, churches, or churchyards; this is evident from the first words of the inscriptions on the old Roman tomb-stones, *Siste viator*, 'stop traveller;' which shews us that they interred their dead by the side of the public roads, and not in their temples, nor in the heart of their towns or cities. The late Joseph II. passed a law on this subject, which does him great honour, in which, after strictly prohibiting the interment of dead bodies in places of public worship, the emperor observes, 'It is horrid that a place of worship, a temple of the Supreme Being, should be converted into a pest-house for living creatures! A person who, upon his death-bed, makes it a condition of his will to be buried in a church or chapel, acts like a madman; he ought to set his fellow-creatures a good example, and not to do all in his power to destroy their constitutions, by exposing them to the effluvia arising from a corpse in a state of putrefaction.'

CHAP. V.

OF EXERCISE.

MANY people look upon the necessity man is under of earning his bread by labour, as a curse. Be this as it may, it is evident from the structure of the body, that exercise is not less necessary than food for the preservation of health: those whom poverty obliges to labour for daily bread, are not only the most healthy, but generally the most happy part of mankind. Industry seldom fails to place them above want, and activity serves them instead of physic. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant colonies, and the longevity of such as follow agriculture everywhere, evidently prove it to be the most healthful as well as the most useful employment.

The love of activity shews itself very early in man. So strong is this principle, that a healthy youth cannot be re-

strained from exercise even by the fear of punishment. Our love of motion is surely a strong proof of its utility. Nature implants no disposition in vain. It seems to be a catholic law throughout the whole animal creation, that no creature, without exercise, should enjoy health, or be able to find subsistence. Every creature, except man, takes as much of it as is necessary. He alone, and such animals as are under his direction, deviate from this original law, and they suffer accordingly.

Inactivity never fails to induce an universal relaxation of the solids, which disposes the body to innumerable diseases. When the solids are relaxed, neither the digestion nor any of the secretions can be duly performed. In this case, the worst consequences must ensue. How can persons who loll all day in easy chairs, and sleep all night on beds of down, fail to be relaxed! Nor do such greatly mend the matter, who never stir abroad but in a coach, sedan, or such like. These elegant pieces of luxury are become so common, that the inhabitants of great towns seem to be in some danger of losing the use of their limbs altogether. It is now below any one to walk, who can afford to be carried. How ridiculous would it appear to a person acquainted with modern luxury, to behold the young and healthy swinging along on the shoulders of their fellow-creatures! or to see a fat carcase, over-run with diseases occasioned by inactivity, dragged through the streets by half a dozen horses!*

Glandular obstructions, now so common, generally proceed from inactivity. These are the most obstinate of maladies. So long as the liver, kidneys, and other glands, duly perform their functions, health is seldom impaired; but when they fail, nothing can restore it. Exercise is almost the only cure we know for glandular obstructions; indeed, it does not always succeed as a remedy; but there is reason to believe that it would seldom fail to prevent these complaints, were it used in due time. One thing is certain, that among those who take sufficient exercise, glandular diseases

* It is not necessity, but fashion, which makes the use of carriages so common. There are many people who have not exercise enough to keep their humours wholesome, who yet dare not venture to make a visit to their next neighbours, but in a coach or sedan, lest they should be looked down upon. Strange, that men should be such fools to be laughed out of the use of their limbs, or to throw away their health, in order to gratify a piece of vanity, or to comply with a ridiculous fashion!

are very little known; whereas the indolent and inactive are very seldom free from them.

Weak nerves are the constant companions of inactivity. Nothing but exercise and open air can brace and strengthen the nerves, or prevent the endless train of diseases which proceed from a relaxed state of these organs. We seldom hear the active or laborious complain of nervous diseases; these are reserved for the sons of ease and affluence. Many have been completely cured of these disorders by being reduced from a state of opulence, to labour for their daily bread. This plainly points out the sources from whence nervous diseases flow, and the means by which they may be prevented.

It is absolutely impossible to enjoy health where the perspiration is not duly carried on; but that can never be the case where exercise is neglected. When the matter which ought to be thrown off by perspiration is retained in the body, it vitiates the humours, and occasions the gout, fevers, rheumatism, &c. Exercise alone would prevent many of those diseases which cannot be cured, and would remove others where medicine proves ineffectual.

A late author,* in his excellent treatise on Health, says, that the weak and valetudinary ought to make exercise a part of their religion. We would recommend this, not only to the weak and valetudinary, but to all whose business does not oblige them to take sufficient exercise, as sedentary artificers,† shopkeepers, studious persons, &c. Such ought to use exercise as regularly as they take food. This might generally be done without any interruption to business, or real loss of time.

No piece of indolence hurts the health more than the

* Cheyne.

† Sedentary occupations ought chiefly to be followed by women: They bear confinement much better than men, and are fitter for every kind of business which does not require much strength. It is ridiculous enough to see a lusty fellow making pins, needles, or watch wheels, while many of the laborious parts of husbandry are carried on by the other sex. The fact is, we want men for laborious employments, while one half of the other sex are rendered useless for want of occupations suited to their strength, &c. Were girls bred to mechanical employments, we should not see such numbers of them prostitute themselves for bread, nor find such a want of men for the important purposes of navigation, agriculture, &c. An eminent silk manufacturer told me, that he found women answer better for that business than men; and that he had lately taken a great many girls apprentices as silk weavers. I hope his example will be followed by many others.

modern custom of lying a-bed too long in the morning. This is the general practice in great towns. The inhabitants of cities seldom rise before eight or nine o'clock; but the morning is undoubtedly the best time for exercise, while the stomach is empty, and the body refreshed with sleep. Besides, the morning air braces and strengthens the nerves, and, in some measure, answers the purpose of a cold bath. Let any one who has been accustomed to lie a-bed till eight or nine o'clock, rise by six or seven, spend a couple of hours in walking, riding, or any active diversion without doors, and he will find his spirits cheerful and serene through the day, his appetite keen, and his body braced and strengthened. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

The inactive are continually complaining of pains of the stomach, flatulences, indigestions, &c. These complaints, which pave the way to many others, are not to be removed by medicines. They can only be cured by a vigorous course of exercise, to which indeed they seldom fail to yield.

Exercise, if possible, ought always to be taken in the open air. When that cannot be done, various methods may be contrived for exercising the body within doors, as the dumb bell, dancing, fencing, &c. It is not necessary to adhere strictly to any particular kind of exercise. The best way is to take them by turns, and to use that longest which is most suitable to the strength and constitution. Those kinds of exercise which give action to most of the bodily organs, are always to be preferred, as walking, running, riding, digging, rubbing furniture, and such like.

It is much to be regretted, that active and manly diversions are now so little practised. Diversions make people take more exercise than they otherwise would do, and are of the greatest service to such as are not under the necessity of labouring for their bread. As active diversions lose ground, those of a sedentary kind seem to prevail. Sedentary diversions are of no other use but to consume time. Instead of relieving the mind, they often require more thought than either study or business. Every thing that induces people to sit still, unless it be some necessary employment, ought to be avoided.

The diversions which afford the best exercise are, hunt-

ing, shooting, playing at cricket, hand-ball, golff,* &c. These exercise the limbs, promote perspiration, and the other secretions. They likewise strengthen the lungs, and give firmness and agility to the whole body.

Such as can, ought to spend two or three hours a-day on horseback: those who cannot ride should employ the same time in walking. Exercise should never be continued too long. Over-fatigue prevents the benefit of exercise, and instead of strengthening the body, tends to weaken it.

Every man should lay himself under some sort of necessity to take exercise. Indolence, like other vices, when indulged, gains ground, and at length becomes agreeable. Hence many who are fond of exercise in the early part of life, become quite averse from it afterwards. This is the case of most hypochondriac and gouty people, which renders their diseases in a great measure incurable.

In some countries laws have been made, obliging every man, of whatever rank, to learn some mechanical employment. Whether such laws were designed for the preservation of health, or the encouragement of manufacture, is a question of no importance. Certain it is, that if gentlemen were frequently to amuse and exercise themselves in this way, it might have many good effects. They would at least derive as much honour from a few masterly specimens of their own workmanship, as from the character of having ruined most of their companions by gaming or drinking. Besides, men of leisure, by applying themselves to the mechanical arts, might improve them, to the great benefit of society.

Indolence not only occasions diseases, and renders men useless to society, but promotes all manner of vice. To say a man is idle, is little better than to call him vicious. The mind, if not engaged in some useful pursuit, is constantly in quest of ideal pleasures, or impressed with the apprehension of some imaginary evil. From these sources proceed most of the miseries of mankind. Certainly man was never intended to be idle. Inactivity frustrates the very design

* Golff is a diversion very common in North Britain. It is well calculated for exercising the body, and may always be taken in such moderation as neither to over-heat nor fatigue. It has greatly the preference over cricket, tennis, or any of those games which cannot be played without violence.

of his creation; whereas an active life is the best guardian of virtue, and the greatest preservative of health.

It is indeed evident that the love of motion, as well as the love of food, so observable in every living creature, from the moment of its birth, are wisely designed by nature as the means of its preservation. The indolent man is therefore a rebel to her laws, and will certainly provoke her severest punishment. In vain does he hope for enjoyment in the lap of sloth; its chilling influence poisons the source of every pleasure, and not only invites disease, but renders it almost incurable.

CHAP. VI.

OF SLEEP AND CLOTHING.

Sleep, as well as diet, ought to be duly regulated. Too little sleep weakens the nerves, exhausts the spirits, and occasions diseases; and too much renders the mind dull, the body gross, and disposes to apoplexies, lethargies, and other complaints of a similar nature. A medium ought therefore to be observed: but this is not easy to fix. Children require more sleep than grown persons, the laborious than the idle, and such as eat and drink freely, than those who live abstemiously. Besides, the real quantity of sleep cannot be measured by time, as one person will be more refreshed by five or six hours sleep, than another by eight or ten.

Children may always be allowed to take as much sleep as they please; but for adults, six or seven hours are certainly sufficient, and no one ought to exceed eight. Those who lie in bed more than eight hours may slumber, but they can hardly be said to sleep: such generally toss and dream away the fore part of the night, sink to rest towards morning, and dose till noon. The best way to make sleep sound and refreshing, is to rise betimes. The custom of lying in bed for nine or ten hours, not only makes the sleep less refreshing, but relaxes the solids, and greatly weakens the constitution.

Nature points out night as the proper season for sleep. Nothing more certainly destroys the constitution than

night-watching. It is a great pity that a practice so destructive to health should be so much in fashion. How quickly the want of rest in due season will blast the most blooming complexion, or ruin the best constitution, is evident from the ghastly countenances of those who, as the phrase is, turn day into night, and night into day.

To make sleep refreshing, the following things are requisite: First, to take sufficient exercise in the open air; to avoid strong tea or coffee; next, to eat a light supper; and lastly, to lie down with a mind as cheerful and serene as possible.

It is certain that too much exercise will prevent sleep, as well as too little. We seldom however hear the active and laborious complain of sleepless nights. It is the indolent and slothful who generally have these complaints. Is it any wonder that a bed of down should not be refreshing to a person who sits all day in an easy chair? A great part of the pleasure of life consists in alternate rest and motion; but they who neglect the latter can never relish the former. The labourer enjoys more true luxury in plain food and sound sleep, than is to be found in sumptuous tables and downy pillows, where exercise is wanting.

That light suppers cause sound sleep, is true even to a proverb. Many persons, if they exceed the least at that meal, are sure to have uneasy nights; and, if they fall asleep, the load and oppression on their stomach and spirits occasion frightful dreams, broken and disturbed repose, the night-mare, &c. Were the same persons to go to bed with a light supper, or sit up till that meal was pretty well digested, they would enjoy sound sleep, and rise refreshed and cheerful. There are indeed some people who cannot sleep unless they have eat some solid food at night; but this does not imply the necessity of a heavy supper; besides, these are generally persons who have accustomed themselves to this method, and who do not take a sufficient degree of exercise.

Nothing more certainly disturbs our repose than anxiety. When the mind is not at ease, one seldom enjoys sound sleep. This greatest of human blessings flies the wretched, and visits the happy, the cheerful, and the gay. This is a sufficient reason why every man should endeavour to be as easy in his mind as possible when he goes to rest. Many, by

indulging grief and anxious thought, have banished sound sleep so long, that they could never afterwards enjoy it.

Sleep, when taken in the fore part of the night, is generally reckoned most refreshing. Whether this be the effect of habit or not, is hard to say; but as most people are accustomed to go early to bed when young, it may be presumed that sleep, at this season, will prove most refreshing to them ever after. Whether the fore part of the night be best for sleep or not, surely the fore part of the day is fittest both for business and amusement. I hardly ever knew an early riser who did not enjoy a good state of health.*

Early rising is the natural consequence of going to bed early; and this habit implies sobriety, good order, and an exemption from many fashionable follies extremely prejudicial to health. The man who accustoms himself to go to bed at an early hour, can seldom join in the revels of Bacchus, or what are improperly called the *amusements* of the gay world. His rest is not disturbed by the effects of unseasonable luxury. He knows that temperance, moderate exercise, composure of mind, and external tranquillity, are the best opiates. His slumbers are sound and refreshing. The waste of spirits on the preceding day is fully repaired. Every muscle, every fibre, every nerve has regained its proper tone. He rises with cheerfulness and vigour to breathe the morning air, and to enter upon the duties of the day. In short, an attention to this single point of going to bed early, and of rising betimes, will be found to supersede a variety of other precepts, and may be justly called the *golden rule* for the attainment of health and long life.

Of Clothing.

The clothing ought to be suited to the climate. Custom has no doubt a very great influence in this article; but no custom can ever change the nature of things so far, as to render the same clothing fit for an inhabitant of Nova Zembla and the island of Jamaica. It is not indeed necessary to observe an exact proportion between the quantity of

* Men of every occupation, and in every situation of life, have lived to a good old age; nay, some have enjoyed this blessing whose plan of living was by no means regular: but it consists with observation, that all very old men have been early risers. This is the only circumstance attending longevity to which I never knew an exception.

clothes we wear, and the degree of latitude which we inhabit; but at the same time, proper attention ought to be paid to it, as well as to the openness of the country, the frequency and violence of storms, &c.

In youth, while the blood is hot and the perspiration free, it is less necessary to cover the body with a great quantity of clothes; but in the decline of life, when the skin becomes rigid and the humours more cool, the clothing should be increased. Many diseases in the latter period of life proceed from a defect of perspiration: these may, in some measure, be prevented by a suitable addition to the clothing, or by wearing such as are better calculated for promoting the discharge from the skin, as clothes made of cotton, flannel, &c.

The clothing ought likewise to be suited to the season of the year. Clothing may be warm enough for summer which is by no means sufficient for winter. The greatest caution, however, is necessary in making these changes. We ought neither to put off our winter clothes too soon, nor to wear our summer ones too long. In this country, the winter often sets in very early with great rigour, and we have frequently cold weather even after the commencement of the summer months. It would likewise be prudent not to make the change all at once, but to do it gradually; and indeed the changes of apparel in this climate ought to be very inconsiderable, especially among those who have passed the meridian of life.*

Clothes often become hurtful by their being made subservient to the purposes of pride or vanity. Mankind in all ages seem to have considered clothes in this view; accordingly, their fashion and figure have been continually varying, with very little regard either to health, the climate, or conveniency: a farthingale, for example, may be very necessary in hot southern climates, but surely nothing can be more ridiculous in the cold regions of the north.

Even the human shape is often attempted to be mended by dress, and those who know no better believe that man-

* *That colds kill more than plagues,* is an old observation; and with regard to this country, it holds strictly true. Every person of discernment, however, will perceive, that most of the colds which prove so destructive to the inhabitants of Britain, are owing to their imprudence in changing clothes. A few warm days in March or April induce them to throw off their winter garments, without considering that our most penetrating colds generally happen in the spring.

kind would be monsters without its assistance. All attempts of this nature are highly pernicious. The most destructive of them in this country, is that of squeezing the stomach and bowels into as narrow a compass as possible, to procure what is falsely called a fine shape.* By this practice, the action of the stomach and bowels, the motion of the heart and lungs, and almost all the vital functions, are obstructed. Hence proceed indigestions, syncopes or fainting-fits, coughs, consumptions of the lungs, and other complaints so common among females.

The feet likewise often suffer by pressure. How a small foot came to be reckoned genteel, I will not pretend to say; but certain it is, that this notion has made many persons lame. Almost nine-tenths of mankind are troubled with corns: a disease that is seldom or never occasioned but by strait shoes. Corns are not only very troublesome, but by rendering people unable to walk, they may likewise be considered as the remote cause of other diseases.†

The size and figure of the shoe ought certainly to be adapted to the foot. In children the feet are as well shaped as the hands, and the motion of the toes as free and easy as that of the fingers; yet few persons in the advanced periods of life are able to make any use of their toes. They are generally, by narrow shoes, squeezed all of a heap, and often laid over one another in such a manner as to be rendered altogether incapable of motion. Nor is the high heel less hurtful than the narrow toe. A lady may seem taller for walking on her tiptoes, but she will never walk well in this manner. It strains her joints, distorts her limbs, makes her stoop, and utterly destroys all her ease and gracefulness of motion: it is entirely owing to shoes with

* This madness seems to have pervaded the minds of mothers in every age and country. Terence, in his Comedy of the Eunuch, ridicules the Roman matrons for attempting to mend the shape of their daughters.

† We often see persons, who are rendered quite lame by the nails of their toes having grown into the flesh, and frequently hear of mortifications proceeding from this cause. All these, and many other inconveniences attending the feet, must be imputed solely to the use of short and tight shoes.

Though we hear frequently of plasters, salves, ointments, &c. for *eradicating* corns, yet they are never known to produce that effect. The only rational mode of proceeding is to soften the corn a little by immersion in warm water, and then to cut it carefully, and to renew this operation every week, till the scarf skin is reduced to its original or natural thinness, after which it must be preserved from the irritating pressure of strait shoes, which had at first occasioned the painful callosity.

high heels and narrow toes, that not one female in ten can be said to walk well.

In fixing on the clothes, due care should be taken to avoid all tight bandages. Garters, buckles, &c. when drawn too tight, not only prevent the free motion and use of the parts about which they are bound, but likewise obstruct the circulation of the blood, which prevents the equal nourishment and growth of these parts, and occasions various diseases. Tight bandages about the neck, as stocks, cravats, necklaces, &c. are extremely dangerous. They obstruct the blood in its course from the brain, by which means headaches, vertigoes, apoplexies, and other fatal diseases, are often occasioned.

The perfection of dress is to be easy and clean. Nothing can be more ridiculous, than for any one to make himself a slave to fine clothes. Such a one, and many such there are, would rather remain fixed as a statue from morning till night, than discompose a single hair, or alter the position of a pin. Were we to recommend any particular pattern for dress, it would be that which is worn by the people called Quakers. They are always neat, clean, and often elegant, without any thing superfluous. What others lay out upon tawdry laces, ruffles, and ribands, they bestow upon superior cleanliness. Finery is only the affectation of dress, and very often covers a great deal of dirt.

We shall only add with regard to clothing, that it ought not only to be suited to the climate, the season of the year, and the period of life, but likewise to the temperature and constitution. Robust persons are able to endure either cold or heat better than the delicate; consequently may be less attentive to their clothing. But the precise quantity of clothes necessary for any person cannot be determined by reasoning. It is entirely a matter of experience, and every man is the best judge for himself, what quantity of clothes is necessary to keep him warm.*

* The celebrated Boerhaave used to say, that nobody suffered by cold, save fools and beggars; the latter not being able to procure clothes, and the former not having sense to wear them. Be this as it may, I can with the strictest truth declare, that in many cases where the powers of medicine had been tried in vain, I have cured the patient by recommending thick shoes, a flannel waistcoat and drawers, a pair of under stockings, or a flannel petticoat, to be worn during the cold season at least. Where warmer clothing is wanted, I would recommend the fleecy hosiery to be worn next the skin,

Of late years a reformation has taken place in female dress, at once beneficial to the health, and honourable to the taste of our fair countrywomen. Elegant simpicity has succeeded to capricious absurdity. The distorture of close stays is abolished, and the body left to its natural shape; the dangerous and awkward position of the foot, treading on the tip-toe on high-heeled shoes, has given place to the flat-heel, when the wearer can walk with firmness, ease, and grace. Nature and good sense have resumed their dominion.

CHAP. VII.

OF INTEMPERANCE.

A MODERN author * observes, that temperance and exercise are the two best physicians in the world. He might have added, that if these were duly regarded, there would be little occasion for any other. Temperance may justly be called the parent of health; yet numbers of mankind act as if they thought diseases and death too slow in their progress, and by intemperance and debauch seem as it were to solicit their approach.

The danger of intemperance appears from the very construction of the human body. Health depends on that state of the solids and fluids which fits them for the due performance of the vital functions; and while these go regularly on, we are sound and well; but whatever disturbs them necessarily impairs health. Intemperance never fails to disorder the whole animal economy; it hurts the digestion, relaxes the nerves, renders the different secretions irregular, vitiates the humours, and occasions numberless diseases.

The analogy between the nourishment of plants and animals affords a striking proof of the danger of intemperance. Moisture and manure greatly promote vegetation; yet an over-quantity of either will entirely destroy it. The best things become hurtful, nay destructive, when carried to excess. Hence we learn that the highest degree of human wisdom consists in regulating our appetites and passions so as to avoid all extremes. It is that chiefly which entitles

* Rousseau.

us to the character of rational beings. The slave of appetite will ever be the disgrace of human nature.

The Author of Nature hath endowed us with various passions, for the propagation of the species, the preservation of the individual, &c. Intemperance is the abuse of these passions; and moderation consists in the proper regulation of them. Men, not contented with satisfying the simple calls of nature, create artificial wants, and are perpetually in search after something that may gratify them; but imaginary wants can never be gratified. Nature is content with little; but luxury knows no bounds. Hence the epicure, the drunkard, and the debauchee, seldom stop in their career till their money or their constitution fails; then indeed they generally see their error when too late.

It is impossible to lay down fixed rules with regard to diet, on account of the different constitutions of mankind. The most ignorant person, however, certainly knows what is meant by excess; and it is in the power of every man, if he chooses, to avoid it.

The great rule of diet is to study simplicity. Nature delights in the most plain and simple food, and every animal, except man, follows her dictates. Man alone riots at large, and ransacks the whole creation in quest of luxuries, to his own destruction. An elegant writer* of the last age speaks thus of intemperance in diet: "For my part, when I behold a fashionable table set out in all its magnificence, I fancy that I see gouts and dropsies, fevers and lethargies, with other innumerable distempers, lying in ambuscade among the dishes."

Nor is intemperance in other things less destructive than in diet. How quickly does the immoderate pursuit of carnal pleasures, or the abuse of intoxicating liquors, ruin the best constitution! Indeed these vices generally go hand in hand. Hence it is that we so often behold the votaries of Bacchus and Venus, even before they have arrived at the prime of life, worn out with diseases, and hastening with swift pace to an untimely grave. Did men reflect on the painful diseases and premature deaths which are daily occasioned by intemperance, it would be sufficient to make them shrink back with horror from the indulgence even of their darling pleasures.

* Addison.

Intemperance does not hurt its votaries alone ; the innocent too often feel the direful effects of it. How many wretched orphans are to be seen embracing dunghills, whose parents, regardless of the future, spent in riot and debauch what might have served to bring up their offspring in a decent manner ! How often do we behold the miserable mother, with her helpless infants, pining in want, while the cruel father is indulging his insatiate appetites !

Families are not only reduced to misery, but even extirpated, by intemperance. Nothing tends so much to prevent propagation, and to shorten the lives of children, as the intemperance of parents. The poor man who labours all day, and at night lies down contented with his humble fare, can boast a numerous offspring, while his pampered lord, sunk in ease and luxury, often languishes without an heir to his ample fortunes. Even states and empires feel the influence of intemperance, and rise or fall as it prevails.

Instead of mentioning the different kinds of intemperance, and pointing out their influence upon health, we shall only, by way of example, make a few observations on one particular species of that vice, viz. the abuse of intoxicating liquors.

Every act of intoxication puts nature to the expense of a fever, in order to discharge the poisonous draught. When this is repeated almost every day, it is easy to foresee the consequences. That constitution must be strong indeed, which is able long to hold out under a daily fever ! but fevers occasioned by drinking do not always go off in a day : they frequently end in an inflammation of the breast, liver, or brain, and produce fatal effects.

Though the drunkard should not fall by an acute disease, he seldom escapes those of a chronic kind. Intoxicating liquors, when used to excess, weaken the bowels and spoil the digestion : they destroy the power of the nerves, and occasion paralytic and convulsive disorders ; they likewise heat and inflame the blood, destroy its balsamic quality, render it unfit for circulation, and the nourishment of the body. Hence obstructions, atrophies, dropsies, and consumptions of the lungs. These are the common ways in which drunkards make their exit. Diseases of this kind, when brought on by hard drinking, seldom admit of a cure.

Many people injure their health by drinking, who seldom get drunk. The continual habit of soaking, as it is called,

though its effects be not so violent, is not less pernicious. When the vessels are kept constantly full and upon the stretch, the different digestions can neither be duly performed, nor the humours properly prepared. Hence most people of this character are afflicted with the gout, the gravel, ulcerous sores in the legs, &c. If these disorders do not appear, they are seized with low spirits, hypochondriacal affections, and other symptoms of indigestion.

Consumptions are now so common, that it is thought one-tenth of the inhabitants of great towns die of that disease. Hard drinking is no doubt one of the causes to which we must impute the increase of consumptions. The great quantities of viscid malt liquor drank by the common people of England, cannot fail to render the blood sizy and unfit for circulation; from whence proceed obstructions, and inflammations of the lungs. There are few great ale-drinkers who are not phthisical: nor is that to be wondered at, considering the glutinous and almost indigestible nature of strong ale.

Those who drink ardent spirits or strong wines run still greater hazard; these liquors heat and inflame the blood, and tear the tender vessels of the lungs to pieces; yet so great is the consumption of them in this country, that one would almost be induced to think that the inhabitants lived upon them.*

The habit of drinking proceeds frequently from misfortunes in life. The miserable fly to it for relief. It affords them indeed a temporary ease. But, alas! this solace is short-lived; and when it is over, the spirits sink as much below their usual tone as they had before been raised above it. Hence a repetition of the dose becomes necessary, and every fresh dose makes way for another, till the unhappy wretch becomes a slave to the bottle, and at length falls a sacrifice to what at first perhaps was taken only as a medicine. No man is so dejected as the drunkard when his de-

* We may form some notion of the immense quantity of ardent spirits consumed in Great Britain from this circumstance, that in the city of Edinburgh and its environs, besides the great quantity of foreign spirits duly entered, and the still greater quantity which is supposed to be smuggled, it is computed that above two thousand private stills are constantly employed in preparing a poisonous liquor called *Molasses*. The common people have got so universally into the habit of drinking this base spirit, that when a porter or labourer is seen reeling along the streets, they say, *he has got molassed*.

bauch is gone off. Hence it is, that those who have the greatest flow of spirits while the glass circulates freely, are of all others the most melancholy when sober, and often put an end to their own miserable existence in a fit of spleen or ill humour.

Drunkenness not only proves destructive to health, but likewise to the faculties of the mind. It is strange that creatures, who value themselves on account of a superior degree of reason to that of brutes, should take pleasure in sinking so far below them. Were such as voluntarily deprive themselves of the use of reason, to continue ever after in that condition, it would seem but a just punishment. Though this be not the consequence of one act of intoxication, it seldom fails to succeed a course of it. By a habit of drinking, the greatest genius is often reduced to a mere idiot.*

Intoxication is peculiarly hurtful to young persons. It heats their blood, impairs their strength, and obstructs their growth; besides, the frequent use of strong liquors in the early part of life, destroys any benefit that might arise from them afterwards. Those who make a practice of drinking generous liquors when young, cannot expect to reap any benefit from them as a cordial in the decline of life.

Drunkenness is not only in itself a most abominable vice, but is an inducement to many others. There is hardly any crime so horrid that the drunkard will not perpetrate for the love of liquor. We have known mothers sell their children's clothes, the food that they should have eat, and afterwards even the infants themselves, in order to purchase the accursed draught.

The first propensities to intemperance, both in eating and drinking, ought to be guarded against. The stomach, after

* It is amazing that our improvements in arts, learning, and politeness, have not put the barbarous custom of drinking to excess out of fashion. It is indeed less common in South Britain than it was formerly; but it still prevails very much in the North, where this relic of barbarity is mistaken for hospitality. There no man is supposed to entertain his guests well, who does not make them drunk. Forcing people to drink is certainly the greatest piece of rudeness that any man can be guilty of. Manliness, complaisance, or mere good-nature, may induce a man to take his glass, if urged to it, at a time when he might as well take poison. The custom of drinking to excess has long been out of fashion in France; and, as it begins to lose ground among the politer part of the English, we hope it will soon be banished from every part of this island.

being often put upon the full stretch, feels uneasiness from the least vacuity, and acquires an unnatural craving, the gratification of which produces heaviness, debility, and disease. Frequent indulgence in drinking to excess causes a faintness and depression of the spirits, which can only be removed by having recourse to the favourite liquor, and the drunkard looks upon the repetition of last night's debauch as the best remedy for its consequences next day. Mild diluting liquors are rejected as insipid, and a succession of hot stimulants increases the action of the heart and arteries; the lungs become inflamed, and a total relaxation of the system ensues.

CHAP. VIII.

OF CLEANLINESS.

The want of cleanliness is a fault which admits of no excuse. Where water can be had for nothing, it is surely in the power of every person to be clean. The continual discharge from our bodies by perspiration, renders frequent change of apparel necessary. Changing apparel greatly promotes the secretion from the skin, so necessary for health. When that matter which ought to be carried off by perspiration is either retained in the body, or re-absorbed from dirty clothes, it must occasion diseases.

Diseases of the skin are chiefly owing to want of cleanliness.* They may indeed be caught by infection, or brought on by poor living, unwholesome food, &c.; but they will seldom continue long where cleanliness prevails. To the same cause must we impute the various kinds of vermin which infest the human body, houses, &c. These may always be banished by cleanliness aione, and wherever they abound, we have reason to believe it is neglected.

* Mr Pott, in his surgical observations, mentions a disease which he calls the chimney-sweeper's cancer, as it is almost peculiar to that unhappy set of people. This he attributes to neglect of cleanliness, and with great justice. I am convinced that if that part of the body which is the seat of this cruel disease were kept clean by frequent washing, it would never happen. The climbing boys, as they are called, are certainly the most miserable wretches on the face of the earth; yet, for cleaning chimnies, no such persons are necessary.

One common cause of putrid and malignant fevers is the want of cleanliness. These fevers commonly begin among the inhabitants of close dirty houses, who breathe unwholesome air, take little exercise, and wear dirty clothes. There the infection is generally hatched, which often spreads far and wide, to the destruction of many. Hence cleanliness may be considered as an object of public attention. It is not sufficient that I be clean myself, while the want of it in my neighbour affects my health as well as his. If dirty people cannot be removed as a common nuisance, they ought at least to be avoided as infectious. All who regard their health should keep at a distance even from their habitations.

In places where great numbers of people are collected, cleanliness becomes of the utmost importance. It is well known that infectious diseases are communicated by tainted air. Every thing, therefore, which tends to pollute the air, or spread the infection, ought with the utmost care to be guarded against. For this reason, in great towns, no filth of any kind should be permitted to lie upon the streets. Nothing is more apt to convey infection than the excrements of the diseased.

In many great towns the streets are little better than dunghills, being frequently covered with ashes, dung, and nastiness of every kind. Even slaughter-houses, or killing shambles, are often to be seen in the very centre of great towns. The putrid blood, excrements, &c. with which these places are generally covered, cannot fail to taint the air, and render it unwholesome. How easily might this be prevented by active magistrates, who have it always in their power to make proper laws relative to things of this nature, and to enforce the observance of them!

We are sorry to say that the importance of general cleanliness does not seem to be sufficiently understood by the magistrates of most great towns in Britain; though health, pleasure, and delicacy, all conspire to recommend an attention to it. Nothing can be more agreeable to the senses, more to the honour of the inhabitants, or more conducive to their health, than a clean town; nor can any thing impress a stranger with a more disrespectful idea of any people than its opposite. Whatever pretensions people may make to learning, politeness, or civilization, we will venture to

affirm, that while they neglect cleanliness, they are in a state of barbarity.*

The peasants in most countries seem to hold cleanliness in a sort of contempt. Were it not for the open situation of their houses, they would often feel the bad effects of this disposition. One seldom sees a farm-house without a dung-hill before the door, and frequently the cattle and their masters lodge under the same roof. Peasants are likewise extremely careless with respect to change of apparel, keeping their houses, &c. clean. This is merely the effect of indolence and a dirty disposition. Habit may indeed render it less disagreeable to them, but no habit can ever make it salutary to wear dirty clothes, or breathe unwholesome air.

As many articles of diet come through the hands of peasants, every method should be taken to encourage and promote habits of cleanliness among them. This, for example, might be done by giving a small premium to the person who brings the cleanest and best article of any kind to market, as butter, cheese, &c. and by punishing severely those who bring it dirty. The same method should be taken with butchers, bakers, brewers, and all who are employed in preparing the necessaries of life.

In camps, the strictest regard should be paid to cleanliness. By negligence in this matter, infectious diseases are often spread amongst a whole army; and frequently more die of these than by the sword. The Jews, during their encampments in the wilderness, received particular instructions with respect to cleanliness.† The rules enjoined them ought to be observed by all in the like situation. Indeed, the whole system of laws delivered to that people has a manifest tendency to promote cleanliness. Whoever con-

* In ancient Rome the greatest men did not think cleanliness an object unworthy of their attention. Pliny says, the *Cloacæ*, or common sewers for the conveyance of filth and nastiness from the city, were the greatest of all the public works; and bestows higher encomiums upon Tarquinius, Agrippa, and others who made and improved them, than on those who achieved the greatest conquests.

How truly great does the emperor Trajan appear, when giving directions to Pliny his proconsul, concerning the making of a common sewer for the health and convenience of a conquered city!

† 'Thou shalt have a place also without the camp, whither thou shalt go forth abroad; and thou shalt have a paddle upon thy weapon; and it shall be when thou shalt ease thyself abroad, thou shalt dig therewith, and shalt turn back, and cover that which cometh from thee,' &c.

DEUT. chap xxii. ver. 12, 13.

siders the nature of their climate, the diseases to which they were liable, and their dirty disposition, will see the propriety of such laws.

It is remarkable, that in most eastern countries, cleanliness makes a great part of their religion. The Mahometan as well as the Jewish religion enjoins various bathings, washings, and purifications. No doubt these might be designed to represent inward purity: but they were at the same time calculated for the preservation of health. However whimsical these washings may appear to some, few things would tend more to prevent diseases than a proper attention to many of them. Were every person, for example, after visiting the sick, handling a dead body, or touching any thing that might convey infection, to wash before he went into company, or sat down to meat, he would run less hazard either of catching the infection himself, or of communicating it to others.

Frequent washing not only removes the filth and sordes which adhere to the skin, but likewise promotes the perspiration, braces the body, and enlivens the spirit. How refreshed, how cheerful and agreeable does one feel on being shaved, washed, and shifted; especially when these offices have been neglected longer than usual!

The eastern custom of washing the feet, though less necessary in this country, is nevertheless a very agreeable peace of cleanliness, and contributes greatly to the preservation of health. The sweat and dirt with which these parts are frequently covered, cannot fail to obstruct the perspiration. This piece of cleanliness would often prevent colds and fevers. Were people careful to bathe their feet and legs in lukewarm water at night, after being exposed to cold or wet through the day, they would seldom experience the ill effects which often proceed from these causes.

A proper attention to cleanliness is no where more necessary than on ship-board. If epidemical distempers break out there, no one can be safe. The best way to prevent them, is to take care that the whole company be cleanly in their clothes, bedding, &c. When infectious diseases do break out, cleanliness is the most likely means to prevent their spreading; it is likewise necessary to prevent their returning afterwards, or being conveyed to other places. For this purpose, the clothes, bedding, &c. of the sick

ought to be carefully washed and fumigated with brimstone. Infection will lodge a long time in dirty clothes, and afterwards break out in the most terrible manner.

In places where great numbers of sick people are collected together, as gaols, hospitals, &c. cleanliness ought to be most religiously observed. The very smell in such places is often sufficient to make one sick. It is easy to imagine what effect that is likely to have upon the diseased. In an hospital or infirmary where cleanliness is neglected, a person in perfect health has a greater chance to become sick, than a person has to get well.

Few things are more unaccountable than that neglect, or rather dread of cleanliness, which appears among those who have the care of the sick; they think it almost criminal to suffer any thing that is clean to come near a person in a fever, for example, and would rather allow him to wallow in all manner of filth, than change the least bit of his linen. If cleanliness be necessary for persons in health, it is certainly more so for the sick. Many diseases may be cured by cleanliness alone; most of them might be mitigated by it; and, where it is neglected, the slightest disorders are often changed into the most malignant. The same mistaken care which prompted people to prevent the least admission of fresh air to the sick, seems to have induced them to keep them dirty. Both these destructive prejudices will, we hope, be soon entirely eradicated.

Cleanliness is certainly agreeable to our nature. We cannot help approving it in others, even though we should not practise it ourselves. It sooner attracts our regard than even finery itself, and often gains esteem where that fails. It is an ornament to the highest as well as the lowest station, and cannot be dispensed with in either. Few virtues are of more importance to society than general cleanliness. It ought to be carefully cultivated everywhere, but in populous cities it should be almost revered.*

* As it is impossible to be thoroughly clean without a sufficient quantity of water, we would earnestly recommend it to the magistrates of great towns to be particularly attentive to this article. Most great towns in Britain are so situated as to be easily supplied with water; and those persons who will not make a proper use of it after it is brought to their hand, certainly deserve to be severely punished. The streets of great towns, where water can be had, ought to be washed every day. This is

The poor often complain of the want of many things beyond their reach, while they disregard other objects of the first importance which are in their own power; namely, pure, open air, and the comforts of cleanliness. Uncleanliness has been very properly denominated 'the worst affliction of indolence and poverty.' There is no excuse for dirt. Every body may be clean, even in rags, or in the meanest abode; and the poor would find such decency not only the best preservative of health, but the strongest recommendation to employment and to pity.

CHAP. IX.

OF INFECTION.

MANY diseases are infectious. Every person ought therefore, as far as he can, to avoid all communication with the diseased. The common practice of visiting the sick, though often well meant, has many ill consequences. Far be it from me to discourage any act of charity or benevolence, especially towards those in distress; but I cannot help blaming such as endanger their own or their neighbour's lives, by a mistaken friendship or an impertinent curiosity.

The houses of the sick, especially in the country, are generally crowded from morning till night with idle visitors. It is customary, in such places, for servants and young people to wait upon the sick by turns, and even to sit up with them all night. It would be a miracle indeed should such always escape. Experience teaches us the danger of this conduct. People often catch fevers in this way, and communicate them to others, till at length they become epidemic.

It would be thought highly improper, for one who had not had the small-pox, to wait upon a patient in that disease; yet many other fevers are almost as infectious as the small-pox, and not less fatal. Some imagine that fevers prove more fatal in villages than in great towns, for want

the only effectual method for keeping them thoroughly clean; and upon trial we are persudaed it will be found the cheapest.

Some of the most dreadful diseases incident to human nature, might, in my opinion, be entirely eradicated by cleanliness.

of proper medical assistance. This may sometimes be the case; but we are inclined to think it often proceeds from the cause above mentioned.

Were a plan to be laid down for communicating infection, it could not be done more effectually than by the common method of visiting the sick. Such visitors not only endanger themselves and their connexions, but likewise hurt the sick. By crowding the house, they render the air unwholesome, and by their private whispers and dismal countenances disturb the imagination of the patient, and depress his spirits. Persons who are ill, especially in fevers, ought to be kept as quiet as possible. The sight of strange faces, and every thing that disturbs the mind, hurts them.

The common practice, in country places, of inviting great numbers of people to funerals, and crowding them into the same apartment where the corpse lies, is another way of spreading infection. The infection does not always die with the patient. Every thing that comes into contact with his body while alive, receives the contagion, and some of them, as clothes, blankets, &c. will retain it for a long time. Persons who die of infectious disorders ought not to lie long unburied; and people should keep as much as possible at a distance from them.

It would tend greatly to prevent the spreading of infectious diseases, if those in health were kept at a proper distance from the sick. The Jewish legislator, among many other wise institutions for preserving health, has been peculiarly attentive to the means of preventing infection, or *defilement*, as it is called, either from a diseased person or a dead body. In many cases the diseased were to be separated from those in health; and it was deemed a crime even to approach their habitations. If a person only touched a diseased or dead body, he was appointed to wash himself in water, and to keep for some time at a distance from society.

Infectious diseases are often communicated by clothes. It is extremely dangerous to wear apparel which has been worn by a person who died of an infectious disease, unless it has been well washed and fumigated, as infection may lodge a long time in it, and afterwards produce very tragical effects. This shews the danger of buying at random the clothes which have been worn by other people.

Infectious disorders are frequently imported. Commerce,

together with the riches of foreign climes, brings us also their diseases. These do often more than counterbalance all the advantages of that trade by means of which they are introduced. It is to be regretted, that so little care is commonly bestowed, either to prevent the introduction or spreading of infectious maladies. Some attention indeed is generally paid to the plague; but other diseases pass unregarded.*

Infection is often spread through cities, by jails, hospitals, &c. These are frequently situated in the very middle of populous towns; and when infectious diseases break out in them, it is impossible for the inhabitants to escape. Did magistrates pay any regard to the health of the people, this evil might be easily remedied.

Many are the causes which tend to diffuse infection through populous cities. The whole atmosphere of a large town is one contaminated mass, abounding with various kinds of infection, and must be pernicious to health. The best advice that we can give to such as are obliged to live in large cities, is to chuse an open situation; to avoid narrow, dirty, crowded streets; to keep their own house and offices clean; and to be as much abroad in the open air as their time will permit.

It would tend greatly to prevent the spreading of infectious diseases, were proper nurses everywhere employed to take care of the sick. This might often save a family, or even a whole town, from being infected by one person. We do not mean that people should abandon their friends or relations in distress, but only to put them on their guard against being too much in company with those who are afflicted with diseases of an infectious nature.

Such as wait upon the sick in infectious diseases, run very

* Were the tenth part of the care taken to prevent the importation of disease, that there is to prevent smuggling, it would be attended with many happy consequences. This might easily be done by appointing a physician at every considerable sea-port, to inspect the ship's company, passengers, &c. before they came ashore, and, if any fever or other infectious disorder prevailed, to order the ship to perform a short quarantine, and to send the sick to some hospital or proper place to be cured. He might likewise order all the clothes, bedding, &c. which had been used by the sick during the voyage, to be either destroyed, or thoroughly cleansed by fumigation, &c. before any of them were sent ashore. A scheme of this kind, if properly conducted, would prevent many fevers, and other infectious diseases, from being brought by sailors into sea-port towns, and by this means diffused all over the country.

great hazard. They should stuff their noses with tobacco, or some other strong smelling herb, as rue, tansy, or the like. They ought likewise to keep the patient very clean, to sprinkle the room where he lies with vinegar or other strong acids, frequently to admit a stream of fresh air into it, and to avoid the smell of his breath as much as they can. They ought never to go into company without having changed their clothes and washed their hands; otherwise, if the disease be infectious, they will in all probability carry the contagion along with them.*

However trifling it may appear to inconsiderate persons, we will venture to affirm, that a due attention to those things which tend to diffuse infection, would be of great importance in preventing diseases. As most diseases are in some degree infectious, no one should continue long with the sick, except the necessary attendants. I mean not, however, by this caution, to deter those whose duty or office leads them to wait upon the sick, from such a laudable and necessary employment.

Many things are in the power of the magistrate, which would tend to prevent the spreading of infection; as the promoting of public cleanliness; removing jails, hospitals, burying grounds, and other places where infection may be generated, at a proper distance from great towns;† widening the streets; pulling down useless walls, and taking all methods to promote a free circulation of air through every part of the town, &c. Public hospitals, or proper places of reception for the sick, provided they were kept clean, well ventilated, and placed in an open situation, would likewise tend to prevent the spreading of infection. Such places of reception would prevent the poor, when sick, from being visited by their idle or officious neighbours. They would

* There is reason to believe that infection is often conveyed from one place to another by the carelessness of the faculty themselves. Many physicians affect a familiar way of sitting upon the patient's bedside, and holding his arm for a considerable time. If the patient has the small-pox, or any other infectious disease, there is no doubt but the doctor's hands, clothes, &c. will carry away some of the infection; and if he goes directly to visit another patient without washing his hands, changing his clothes, or being exposed to the open air, which is not seldom the case, is it any wonder that he should carry the disease along with him? Physicians not only endanger others, but also themselves, by this practice. And indeed they sometimes suffer for their want of care.

† The ancients would not suffer even the temples of their gods, where the sick resorted, to be built within the walls of a city.

likewise render it unnecessary for sick servants to be kept in their masters' houses. Masters had better pay for having their servants taken care of in an hospital, than run the hazard of having an infectious disease diffused among a numerous family. Sick servants and poor people, when placed in hospitals, are not only less apt to diffuse infection among their neighbours, but have likewise the advantage of being well attended.

We are not, however, to learn that hospitals, instead of preventing infection, may become the means of diffusing it. When they are placed in the middle of great towns; when numbers of patients are crowded together in small apartments; where there is a constant communication kept up between the citizens and the patients; and when cleanliness and ventilation are neglected, they become nests for hatching diseases, and every one who goes into them not only runs a risk of receiving infection himself, but likewise of communicating it to others. This, however, is not the fault of the hospitals, but of those who have the management of them. It were to be wished, that they were both more numerous, and upon a more respectable footing, as that would induce people to go into them with less reluctance. This is the more to be desired, because most of the putrid fevers and other infectious disorders break out among the poor, and are by them communicated to the better sort. Were proper attention paid to the first appearances of such disorders, and the patients early conveyed to an hospital, we should seldom see a putrid fever, which is almost as infectious as the plague, become epidemic.

The frequent and unnecessary visits made by people in the country to their friends and neighbours when in fevers, are frequently attended with the worst and most fatal consequences. The infection may be carried into the families where the visitors reside, and spread far and wide. In cases of epidemical disease, the servants of a family should never be suffered to act as nurses or attendants on the sick, even though the latter should be their nearest relations. It were better for masters to hire nurses, than allow their servants to act in that dangerous capacity.

CHAP. X.

OF THE PASSIONS.

The passions have great influence both in the cause and cure of diseases. How the mind affects the body, will, in all probability, ever remain a secret. It is sufficient for us to know, that there is established a reciprocal influence between the mental and corporeal parts, and that whatever injures the one, disorders the other.

Of Anger.

The passion of *anger* ruffles the mind, distorts the countenance, hurries on the circulation of the blood, and disorders the whole vital and animal functions. It often occasions fevers, and other acute diseases; and sometimes even sudden death. This passion is peculiarly hurtful to the delicate, and those of weak nerves. I have known such persons frequently lose their lives by a violent fit of anger, and would advise them to guard against the excess of this passion with the utmost care.

It is not indeed always in our power to prevent being angry: but we may surely avoid harbouring resentment in our breast. Resentment preys upon the mind, and occasions the most obstinate chronical disorders, which gradually waste the constitution. Nothing shews true greatness of mind more than to forgive injuries; it promotes the peace of society, and greatly conduces to our own ease, health, and felicity.

Such as value health, should avoid violent gusts of anger as they would the most deadly poison. Neither ought they to indulge resentment, but endeavour at all times to keep their minds calm and serene. Nothing tends so much to the health of the body, as a constant tranquillity of mind.

Of Fear.

The influence of *fear*, both in occasioning and aggravating diseases, is very great. No man ought to be blamed for a decent concern about life; but too great a desire to preserve it, is often the cause of losing it. Fear and anxiety, by depressing the spirits, not only dispose us to diseases,

but often render those diseases fatal which an undaunted mind would overcome.

Sudden fear has generally violent effects. Epileptic fits, and other convulsive disorders, are often occasioned by it. Hence the danger of that practice, so common among young people, of frightening one another. Many have lost their lives, and others have been rendered miserable, by frolics of this kind. It is dangerous to tamper with the human passions. The mind may easily be thrown into such disorder, as never again to act with regularity.

But the gradual effects of fear prove more hurtful. The constant dread of some future evil, by dwelling upon the mind, often occasions the very evil itself. Hence it comes to pass, that so many die of those very diseases of which they long had a dread, or which had been impressed on their minds by some accident, or foolish prediction. This, for example, is often the case with women in child-bed. Many of those who die in that situation, are impressed with the notion of their death, a long time before it happens; and there is reason to believe that this impression is often the cause of it.

The methods taken to impress the minds of women with the apprehensions of the great *pain* and *peril* of child-birth, are very hurtful. Few women die in labour, though many lose their lives after it; which may be thus accounted for. A woman after delivery, finding herself weak and exhausted, immediately apprehends she is in danger; but this fear seldom fails to obstruct the necessary evacuations, upon which her recovery depends. Thus the sex often fall a sacrifice to their own imaginations, when there would be no danger, did they apprehend none.

It seldom happens, that two or three women in a great town die in child-bed, but their death is followed by many others. Every woman of their acquaintance who is with child dreads the same fate, and the disease becomes epidemical, by the mere force of imagination. This would induce pregnant women to despise fear, and by all means to avoid those tattling gossips who are continually buzzing in their ears the misfortunes of others. Every thing that may in the least alarm a pregnant or child-bed woman, ought with the greatest care to be guarded against.

Many women have lost their lives in child-bed by the

old superstitious custom, still kept up in most parts of Britain, of tolling the parish bell for every person who dies. People who think themselves in danger, are very inquisitive; and if they come to know that the bell tolls for one who died in the same situation with themselves, what must be the consequence? At any rate, they are apt to suppose that this is the case, and it will often be found a very difficult matter to pnrsuade them of the contrary.

But this custom is not pernicious to child-bed women only. It is hurtful in many other cases. When low fevers, in which it is difficult to support the patient's spirits, prevail, what must be the effect of a funeral peal sounding five or six times a-day in his ears? No doubt his imagination will suggest that others died of the same disease under which he labours. This apprehension will have a greater tendency to depress his spirits, than all the cordials of which medicine can boast will have to raise them. The only town which has abolished this custom is Bath.

If this useless piece of ceremony cannot be abolished, we ought to keep the sick as much from hearing it as possible, and from every other thing that may tend to alarm them. So far, however, is this from being generally attended to, that many make it their business to visit the sick, on purpose to whisper dismal stories in their ears. Such may pass for sympathizing friends, but they ought rather to be considered as enemies. All who wish well to the sick, ought to keep such persons at the greatest distance from them.

A custom has long prevailed among physicians, of prognosticating, as they call it, the patient's fate, or foretelling the issue of the disease. Vanity, no doubt, introduced this practice, and still supports it, in spite of common sense, and the safety of mankind. I have known a physician barbarous enough to boast, that he pronounced more *sentences* than all his Majesty's judges. Would to God that such sentences were not often equally fatal! It may indeed be alleged, that the doctor does not declare his opinion before the patient. So much the worse. A sensible patient had better hear what the doctor says, than learn it from the disconsolate looks, the watery eyes, and the broken whispers of those about him.

It seldom happens, when the doctor gives an unfavourable opinion, that it can be concealed from the patient. The

very embarrassment which the friends and attendants shew in disguising what he has said, is generally sufficient to discover the truth.

Kind heaven has, for the wisest ends, concealed from mortals their fate; and we do not see what right any man has to announce the death of another, especially if such a declaration has a chance to kill him. Mankind are indeed very fond of prying into future events, and seldom fail to solicit the physician for his opinion. A doubtful answer however, or one that may tend rather to encourage the hopes of the sick, is surely the most proper. This conduct could neither hurt the patient nor the physician. Nothing tends more to destroy the credit of Physic, than those bold prognosticators, who, by-the-bye, are generally the most ignorant of the faculty. The mistakes which daily happen in this way are so many standing proofs of human vanity, and the weakness of science.

We readily admit, that there are cases where the physician ought to give intimation of the patient's danger to some of his near connexions; though even this ought always to be done with the greatest caution; but it never can be necessary in any case that the whole town and country should know, immediately after the doctor has made his first visit, *that he has no hopes of his patient's recovery.* Persons whose impertinent curiosity leads them to question the physician with regard to the fate of his patient, certainly deserve no other than an evasive answer.

The vanity of foretelling the fate of the sick is not peculiar to the faculty. Others follow their example, and those who think themselves wiser than their neighbours often do much hurt in this way. Humanity surely calls upon every one to comfort the sick, and not add to their affliction by alarming their fears. A friend, or even a physician, may often do more good by a mild and sympathizing behaviour than by medicine, and should never neglect to administer the greatest of all cordials, HOPE.

Of Grief.

Grief is the most destructive of all the passions. Its effects are permanent; and when it sinks deep into the mind, it generally proves fatal. Anger and fear, being of a more violent nature, seldom last long; but grief often changes

into a fixed melancholy, which preys upon the spirits, and wastes the constitution. This passion ought not to be indulged. It may generally be conquered at the beginning; but when it has gained strength, all attempts to remove it are vain.

No person can prevent misfortunes in life; but it shews true greatness of mind to bear them with serenity. Many persons make a merit of indulging grief, and when misfortunes happen, they obstinately refuse all consolation, till the mind, overwhelmed with melancholy, sinks under the load. Such conduct is not only destructive to health, but inconsistent with reason, religion, and common sense.

Change of ideas is as necessary for health, as change of posture. When the mind dwells long upon one subject, especially of a disagreeable nature, it hurts the whole functions of the body. Hence grief indulged spoils the digestion, and destroys the appetite; by which means the spirits are depressed, the nerves relaxed, and the bowels inflated with wind, and the humours, for want of fresh supplies of chyle, vitiated. Thus many an excellent constitution has been ruined by a family misfortune, or any thing that occasions excessive grief.

It is utterly impossible that any person of a dejected mind should enjoy health. Life may indeed be dragged out for a few years; but whoever would live to a good old age, must be good-humoured and cheerful. This indeed is not altogether in our own power; yet our temper of mind, as well as our actions, depend greatly upon ourselves. We can either associate with cheerful or melancholy companions, mingle in the amusements and offices of life, or sit still and brood over our calamities, as we choose. These, and many such things, are certainly in our power, and from these the mind generally takes its cast.

The variety of scenes which present themselves to the senses, were certainly designed to prevent our attention from being too long fixed upon any one object. Nature abounds with variety, and the mind, unless fixed down by habit, delights in contemplating new objects. This at once points out the method of relieving the mind in distress. Turn the attention frequently to new objects. Examine them for some time. When the mind begins to recoil, shift the scene. By this means a constant succession of new

ideas may be kept up, till the disagreeable ones entirely disappear. Thus travelling, the study of any art or science, reading, or writing on such subjects as deeply engage the attention, will sooner expel grief than the most sprightly amusements.

It has already been observed, that the body cannot be healthy unless it be exercised; neither can the mind. Indolence nourishes grief. When the mind has nothing else to think of but calamities, no wonder that it dwells there. Few people who pursue business with attention, are hurt by grief. Instead therefore of abstracting ourselves from the world or business when misfortunes happen, we ought to engage in it with more than usual attention, to discharge with double diligence the functions of our station, and to mix with friends of a cheerful and social temper.

Innocent amusement, are by no means to be neglected. These, by leading the mind insensibly to the contemplation of agreeable objects, help to dispel the gloom which misfortunes cast over it. They make time seem less tedious, and have many other happy effects.

Some persons, when overwhelmed with grief, betake themselves to drinking. This is making the cure worse than the disease. It seldom fails to end in the ruin of fortune, character, and constitution.

Of Love.

Love is perhaps the strongest of all the passions. At least when it becomes violent, it is less subject to the control either of the understanding or will, than any of the rest. Fear, anger, and several other passions, are necessary for the preservation of the individual, but love is necessary for the continuation of the species itself; it was therefore proper that this passion should be deeply rooted in the human breast.

Though love be a strong passion, it is seldom so rapid in its progress as several of the others. Few persons fall desperately in love all in once. We would therefore advise every one, before he tampers with this passion, to consider well the probability of his being able to obtain the object of his wishes. When that is not likely, he should avoid every occasion of increasing it. He ought immediately to fly the company of the beloved object; to apply

his mind attentively to business or study; to take every kind of amusement; and above all, to endeavour, if possible, to find another object which may engage his affections, and which it may be in his power to obtain.

There is no passion with which people are so apt to tamper as love, although none is more dangerous. Some men make love for amusement, others from mere vanity, or on purpose to show their consequence with the fair.

This is perhaps the greatest piece of cruelty which any one can be guilty of. What we eagerly wish for, we easily credit. Hence the too credulous fair are often betrayed into a situation which is truly deplorable, before they are able to discover that the pretended lover was only in a jest. But there is no jesting with this passion. When love has got to a certain height, it admits of no other cure but the possession of its object, which in this case ought always, if possible, to be obtained.*

Of Religious Melancholy.

Many persons of a religious turn of mind behave as if they thought it a crime to be cheerful. They imagine the whole of religion consists in certain mortifications, or denying themselves the smallest indulgence, even of the most innocent amusements. A perpetual gloom hangs over their countenances, while the deepest melancholy preys upon their mind. At length the fairest prospects vanish, every thing puts on a dismal appearance, and those very objects which ought to give delight afford nothing but disgust. Life itself becomes a burden, and the unhappy wretch, persuaded that no evil can equal what he feels, often puts an end to his miserable existence.

It is great pity that ever religion should be so far perverted, as to become the cause of those very evils which it was designed to cure. Nothing can be better calculated than *True Religion* to raise and support the mind of its vo-

* The conduct of parents with regard to the disposal of their children in marriage is often very blameable. An advantageous match is the constant aim of parents; while their children often suffer a real martyrdom betwixt their inclinations and duty. The first thing which parents ought to consult in disposing their children in marriage, is certainly their inclinations. Were due regard always paid to these, there would be fewer unhappy couples, and parents would not have so often cause to repent the severity of their conduct, after a ruined constitution, a lost character, or a distracted mind, has shewn them their mistake.

taries under every affliction that can befal them. It teaches men that even the sufferings of this life are preparatory to the happiness of the next; and that all who persist in a course of virtue shall at length arrive at complete felicity.

Persons whose business it is to recommend religion to others, should beware of dwelling too much on gloomy subjects. That peace and tranquillity of mind, which true religion is calculated to inspire, is a more powerful argument in its favour, than all the terrors that can be uttered. Terror may indeed deter men from outward acts of wickedness, but can never inspire them with that love of God, and real goodness of heart, in which alone true religion consists.

To conclude; the best way to counteract the violence of any passion, is to keep the mind closely engaged in some useful pursuit.

It is said that the late Lord Kaimes, when he saw any literary friend sinking under the pressure of melancholy, or some other corroding passion, always gave this advice in a few emphatical words, 'write a book;' which he believed to be an infallible remedy. A gentleman devoted to the muses, and the author of a very beautiful elegy, was cured of his grief for a wife whom he had tenderly loved, by his anxiety to express, in the most pathetic terms, the poignancy of his sorrow. Indeed, the earnest application of the mind to any important and interesting pursuit, will be found the surest method of conquering passions which reason may in vain attempt to control.

CHAP. XI.

OF THE COMMON EVACUATIONS.

The principal evacuations from the human body, are those by *stool*, *urine*, and *insensible perspiration*. None of these can be long obstructed without impairing the health. When that which ought to be thrown out of the body is too long retained, it not only occasions a *plethora*, or too great fulness of the vessels, but acquires qualities which are hurtful to the health, as acrimony, putrescence, &c.

Of the Evacuation by Stool.

Few things conduce more to health than keeping the body regular. When the *fæces* lie too long in the bowels, they vitiate the humours; and when they are too soon discharged, the body is not sufficiently nourished. A medium is therefore to be desired, which can only be obtained by regularity in diet, sleep, and exercise. Whenever the body is not regular, there is reason to suspect a fault in one or other of these.

Persons who eat and drink at irregular hours, and who eat various kinds of food, and drink of several different liquors at every meal, have no reason to expect either that their digestion will be good, or their discharges regular. Irregularity in eating and drinking disturbs every part of the animal economy, and never fails to occasion diseases. Either too much or too little food will have this effect. The former indeed generally occasions looseness, and the latter costiveness; but both have a tendency to hurt the health.

It would be difficult to ascertain the exact number of stools which may be consistent with health, as these differ in the different periods of life, in different constitutions, and even in the same constitution under a different regimen of diet, exercise, &c. It is however generally allowed, that one stool a-day is sufficient for an adult, and that more or less is hurtful. But this, like most general rules, admits of many exceptions. I have known persons in perfect health who did not go to stool above once a-week.* Such a degree of costiveness, however, is not safe; though the person who labours under it may for some time enjoy tolerable health, yet at length it may occasion diseases.

One method of procuring a stool every day is, to rise betimes, and go abroad in the open air. Not only the posture in bed is unfavourable to regular stools, but also the warmth. This, by promoting the perspiration, lessens all the other discharges.

The method recommended for this purpose by Mr Locke, is likewise very proper, viz. *to solicit nature, by going regularly to stool every morning, whether one has a call or*

* Some persons have told me that they did not go to stool above once a-month.

not. Habits of this kind may be acquired, which will in time become natural.

Persons who have frequent recourse to medicines for preventing costiveness, seldom fail to ruin their constitutions. Purging medicines frequently repeated weaken the bowels, hurt the digestion, and every dose makes way for another, till at length they become as necessary as daily bread. Those who are troubled with costiveness ought rather, if possible, to remove it by diet than drugs. They should likewise go thinly clothed, and avoid every thing of an astringent or of a heating nature. The diet and other regimen necessary in this case will be found under the article *Costiveness*, where this state of the bowels is treated as a disease.

Such persons as are troubled with an habitual looseness, ought likewise to suit their diet to the nature of their complaint. They should use food which braces and strengthens the bowels, and which is rather of an astringent quality, as wheat bread made of the finest flour, cheese, eggs, rice boiled in milk, &c. Their drink should be red port, claret, brandy, and water in which toasted bread has been boiled, and such like.

As an habitual looseness is often owing to an obstructed perspiration, persons affected with it ought to keep their feet warm, to wear flannel next their skin, and take every other method to promote the perspiration. Further directions with regard to the treatment of this complaint will be found under the article *Looseness*.

Of Urine.

So many things tend to change both the quantity and appearances of the urine, that it is very difficult to lay down any determined rules for judging of either.* Dr Cheyne

* It has long been an observation among physicians, that the appearances of the urine are very uncertain, and very little to be depended on. No one will be surprised at this who considers how many ways it may be affected, and consequently have its appearance altered. The passions, the state of the atmosphere, the quantity and quality of the food, the exercise, the clothing, the state of the other evacuations, and numberless other causes, are sufficient to induce a change either in the quantity or appearance of the urine. Any one who attends to this will be astonished at the impudence of those daring quacks, who pretend to find out diseases, and prescribe to patients, from the bare inspection of their urine. These impostors, however, are very common all over Bri-

says, the urine ought to be equal to three-fourths of the liquid part of our aliment. But suppose any one were to take the trouble of measuring both, he would find that every thing which altered the degree of perspiration, would alter this proportion, and likewise that different kinds of aliment would afford very different quantities of urine. Though for these, and other reasons, no rule can be given for judging of the precise quantity of urine which ought to be discharged, yet a person of common sense will seldom be at a loss to know when it is in either extreme.

As a free discharge of urine not only prevents but actually cures many diseases, it ought by all means to be promoted; and every thing that may obstruct it, should be carefully avoided. Both the secretion and discharge of urine are lessened by a sedentary life, sleeping on beds that are too soft and warm, food of a dry and heating quality, liquors which are astringent and heating, as red port, claret, and such like. Those who have reason to suspect that their urine is in too small quantity, or who have any symptoms of the gravel, ought not only to avoid these things, but whatever else they find has a tendency to lessen the quantity of their urine.

When the urine is too long retained, it is not only resorbed, or taken up again into the mass of fluids, but by stagnating in the bladder it becomes thicker, the more watery parts flying off first, and the more gross and earthy remaining behind. By the constant tendency which these have to concrete, the formation of stones and gravel in the bladder is promoted. Hence it comes to pass, that indolent and sedentary people are much more liable to these diseases than persons of a more active life.

Many persons have lost their lives, and others have brought on very tedious, and even incurable disorders, by retaining their urine too long, from a false delicacy. When the bladder has been over-distended, it often loses its power of action altogether, or becomes paralytic, by which means it is rendered unable either to retain the urine, or expel it

tain, and, by the amazing credulity of the populace, many of them amass considerable fortunes. Of all the medical prejudices which prevail in this country, that in favour of *urine doctors* is the strongest. The common people have still an unlimited faith in their skill, although it has been demonstrated that not one of them is able to distinguish the urine of a horse, or any other animal, from that of a man.

properly. The calls of nature ought never to be postponed. Delicacy is doubtless a virtue, but that can never be reckoned true delicacy, which induces any one to risk his health, or hazard his life.

But the urine may be in too great as well as too small a quantity. This may be occasioned by drinking large quantities of weak watery liquors, by the excessive use of alkaline salts, or any thing that stimulates the kidneys, dilutes the blood, &c. This disorder very soon weakens the body, and induces a consumption. It is difficult to cure, but may be mitigated by strengthening diet and astringent medicines, such as are recommended under the article Diabetes, or excessive discharge of urine.

Of the Perspiration.

Insensible perspiration is generally reckoned the greatest of all the discharges from the human body. It is of so great importance to health, that few diseases attack us while it goes properly on; but when it is obstructed, the whole frame is soon disordered. This discharge, however, being less perceptible than any of the rest, is consequently less attended to. Hence it is that acute feevrs, rheumatisms, agues, &c. often proceed from obstructed perspiration, before we are aware of its having taken place.

On examining patients, we find most of them impute their diseases either to violent colds which they had caught, or to slight ones which had been neglected. For this reason, instead of a critical inquiry into the nature of the perspiration, its difference in different seasons, climates, constitutions, &c. we shall endeavour to point out the causes which most commonly obstruct it, and to shew how far they may be either avoided, or have their influence counteracted by timely care. The want of a due attention to these, costs Britain annually some thousands of useful lives.

Changes in the Atmosphere.

One of the most common causes of obstructed perspiration, or catching cold, in this country, is the changeableness of the weather, or state of the atmosphere. There is no place where such changes happen more frequently than in Great Britain. With us the degrees of heat and cold are not only very different in the different seasons of the year,

but often change almost from one extreme into another in a few days, and sometimes even in the course of one day. That such changes must affect the state of the perspiration, is obvious to every one.*

The best method of fortifying the body against the changes of the weather is, to be abroad every day. Those who keep most within doors are most liable to catch cold. Such persons generally render themselves so delicate, as to feel even the slightest change in the atmosphere, and by their pains, coughs, and oppressions of the breast, &c. they become a kind of living barometers.

Wet Clothes.

Wet clothes not only by their coldness obstruct the perspiration, but their moisture, by being absorbed, or taken up into the body, greatly increases the danger. The most robust constitution is not proof against the danger arising from wet clothes; they daily occasion fevers, rheumatisms, and other fatal disorders, even in the young and healthy.

It is impossible for people who go frequently abroad, to avoid sometimes being wet. But the danger might generally be lessened, if not wholly prevented, by changing their clothes soon; and when this cannot be done, they should keep in motion till they be dry. So far are many from taking this precaution, that they often sit or lie down in the fields with their clothes wet, and frequently sleep even whole nights in this condition. The frequent instances which we have of the fatal effects of this conduct, ought certainly to deter all from being guilty of it.

Wet Feet.

Even wet feet often occasion fatal diseases. The colic, inflammations of the breast and of the bowels, the iliac passion, *cholera morbus*, &c. are often occasioned by wet feet. Habit will no doubt render this less dangerous; but it ought as far as possible to be avoided. The delicate, and

* I never knew a more remarkable instance of the uncertainty of the weather in this country, than happened while I was writing these notes. This morning, Aug. 14, 1783, the thermometer in the shade was down at fifty-three degrees, and a very few days ago it stood at above eighty. No one who reflects on such great and sudden changes in the atmosphere, will be surprised to find colds, coughs, rheums, with other affections of the breast and bowels, so common in this country.

those who are not accustomed to have their clothes or feet wet, should be peculiarly careful in this respect.

Night Air.

The perspiration is often obstructed by night air; even in summer this ought to be avoided. The dews which fall plentifully after the hottest day, make the night more dangerous than when the weather is cool. Hence in warm countries, the evening dews are more hurtful than where the climate is more temperate.

It is very agreeable after a warm day to be abroad in a cool evening; but this is a pleasure to be avoided by all who value their health. The effects of evening dews are gradual indeed, and almost imperceptible; but they are not the less to be dreaded: we would therefore advise travellers, labourers, and all who are much heated by day, carefully to avoid them. When the perspiration has been great, these become dangerous in proportion. By not attending to this, in flat marshy countries, where the exhalations and dews are copious, labourers are often seized with intermitting fevers, quinsies, and other dangerous diseases.

Damp Beds.

Beds become damp, either from their not being used, standing in damp houses, or in rooms without fire, or from the linen not being dry when laid on the bed. Nothing is more to be dreaded by travellers than damp beds, which are very common in all places where fuel is scarce. When a traveller, cold and wet, arrives at an inn, he may, by means of a good fire, warm diluting liquor, and a dry bed, have the perspiration restored; but if he be put into a cold room, and laid in a damp bed, it will be more obstructed, and the worst consequences will ensue. Travellers should avoid inns which are noted for damp beds, as they would a house infected with the plague, as no man, however robust, is proof against the danger arising from them.

But inns are not the only places where damp beds are to be met with. Beds kept in private families for the reception of strangers are often equally dangerous. All kinds of linen and bedding, when not frequently used, become damp. How then is it possible that beds, which are not slept in above two or three times a-year, should be safe? Nothing

is more common than to hear people complain of having caught cold by changing their bed. The reason is obvious: were they careful never to sleep in a bed but what was frequently used, they would seldom find any ill consequences from a change.

Nothing is more to be dreaded by a delicate person when on a visit, than being laid in a bed which is kept on purpose for strangers. That ill-judged piece of complaisance becomes a real injury. All the bad consequences from this quarter might easily be prevented in private families, by causing their servants to sleep in the spare beds, and resign them to strangers when they come. In inns, where the beds are used almost every night, nothing else is necessary than to keep the rooms well seasoned by frequent fires, and the linen dry.

That baneful custom said to be practised in many inns, of damping sheets, and pressing them, in order to save washing, and afterwards laying them on beds, ought, when discovered, to be punished with the utmost severity. It is really a species of murder, and will often prove as fatal as poison or gun-shot. Indeed no linen, especially if it has been washed in winter, ought to be used till it has been exposed for some time to the fire: nor is this operation less necessary for linen washed in summer, provided it has lain by for any length of time. This caution is the more needful, as gentlemen are often exceedingly attentive to what they eat or drink at an inn, yet pay no regard to a circumstance of much more importance.*

Damp Houses.

Damp houses frequently produce the like ill consequences: for this reason those who build should be careful to chuse a dry situation. A house which stands on a damp marshy soil or deep clay, will never be thoroughly dry. All houses, unless where the ground is exceedingly dry, should have the first floor a little raised. Servants and others, who are obliged to live in cellars and sunk stories, seldom continue

* If a person suspect that his bed is damp, the simple precaution of taking off the sheets and lying in the blankets, with all, or most of his clothes on, will prevent all the danger. I have practised this for many years, and never have been hurt by damp beds, though no constitution, without care, is proof against their baneful influence.

long in health: masters ought surely to pay some regard to the health of their servants, as well as to their own.

Nothing is more common than for people, merely to avoid some trifling inconveniency, to hazard their lives by inhabiting a house almost as soon as the masons, plasterers, &c. have done with it: such houses are not only dangerous from their dampness, but likewise from the smell of lime, paint, &c. The asthmas, consumptions, and other diseases of the lungs, so incident to people who work in these articles, are sufficient proofs of their being unwholesome.

Rooms are often rendered damp by an unseasonable piece of cleanliness; I mean the pernicious custom of washing them immediately before the company is put into them. Most people catch cold, if they sit for a very short time in a room that has been lately washed; the delicate ought carefully to avoid such a situation, and even the robust are not always proof against its influence.*

Sudden Transitions from Heat to Cold.

The perspiration is commonly obstructed by SUDDEN TRANSITIONS from heat to cold. Colds are seldom caught unless when people have been too much heated. Heat rarifies the blood, quickens the circulation, and increases the perspiration; but when these are suddenly checked, the consequences must be bad. It is indeed impossible for labourers not to be too hot upon some occasions; but it is generally in their power to let themselves cool gradually, to put on their clothes when they leave off work, to make choice of a dry place to rest themselves in, and to avoid sleeping in the open fields. These easy rules, if observed, would often prevent fevers and other fatal disorders.

It is very common for people, when hot, to drink freely of cold water, or small liquors. This conduct is extremely dangerous. Thirst indeed is hard to bear, and the inclination to gratify that appetite frequently gets the better of reason, and makes us do what our judgment disapproves. Every peasant, however, knows if his horse be permitted to drink his bellyful of cold water after violent exercise, and

* People imagine, if a good fire is made in a room after it has been washed, that there is no danger from sitting in it: but they must give me leave to say that this increases the danger. The evaporation excited by the fire generates cold, and renders the damp more active.

be immediately put into the stable, or suffered to remain at rest, that it will kill him. This they take the utmost care to prevent. It were well if they were equally attentive to their own safety.

Thirst may be quenched many ways without swallowing large quantities of cold liquor. The fields afford variety of acid fruits and plants, the very chewing of which would abate thirst. Water kept in the mouth for some time, and spit out again, if frequently repeated, will have the same effect. If a bit of bread be eaten along with a few mouthfuls of water, it will both quench thirst more effectually, and make the danger less. When a person is extremely hot, a mouthful of brandy, or other spirits, if it can be obtained, ought to be preferred to any thing else. But if any one has been so foolish, when hot, as to drink freely of cold liquor, he ought to continue his exercise at least till what he drank be thoroughly warmed upon his stomach.

It would be tedious to enumerate all the bad effects which flow from drinking cold liquors when the body is hot. Sometimes this has occasioned immediate death. Hoarseness, quinsies, and fevers of various kinds, are its common consequences. Neither is it safe when warm to eat freely of raw fruits, salads, or the like. These indeed have not so sudden an effect on the body as cold liquors, but they are notwithstanding dangerous, and ought to be avoided.

Sitting in a warm room, and drinking hot liquors till the pores are quite open, and immediately going into the cold air, is extremely dangerous. Colds, coughs, and inflammations of the breast, are the usual effects of this conduct; yet nothing is more common than for people, after they have drank warm liquors for several hours, to walk or ride a number of miles in the coldest night, or to ramble about in the streets.*

People are very apt, when a room is hot, to throw open a window, and to sit near it. This is a most dangerous practice. Any person had better sit without doors than in such a situation, as the current of air is directed against one par-

* The tap-rooms in London and other great towns, where such numbers of people spend their evenings, are highly pernicious. The breath of a number of people crowded into a low apartment, with the addition of fires, candles, the smoke of tobacco, and the fumes of hot liquor, &c. must not only render it hurtful to continue in such places, but dangerous to go out of them into a cold and chilly atmosphere.

ticular part of the body. Inflammatory fevers, quinsies, and consumptions, have often been occasioned by sitting or standing thinly clothed near an open window. Nor is sleeping with open windows less to be dreaded. That ought never to be done, even in the hottest season, unless the window is at a distance. I have known mechanics frequently contract fatal diseases, by working stripped at an open window, and would advise all of them to beware of such a practice.

Few things expose people more to catch cold than keeping their own houses too warm: such persons may be said to live in a sort of hot-houses; they can hardly stir abroad to visit a neighbour but at the hazard of their lives. Were there no other reason for keeping houses moderately cool, that alone is sufficient: but no house that is too hot can be wholesome; heat destroys the spring and elasticity of the air, and renders it less fit for expanding the lungs, and the other purposes of respiration. Hence it is that consumptions and other diseases of the lungs prove so fatal to people who work in forges, glass-houses, and the like.

Some are even so fool-hardy, as to plunge themselves, when hot, in cold water. Not only fevers, but madness itself, has frequently been the effect of this conduct. Indeed it looks too like the action of a madman to deserve a serious consideration.

The result of all those observations is, that every one ought to avoid, with the utmost attention, all sudden transitions from heat to cold, and to keep the body in as uniform a temperature as possible; or where that cannot be done, to take care, when heated, to let it cool gradually.

People may imagine that too strict an attention to these things would tend to render them delicate. So far, however, is this from being my design, that the very first rule proposed for preventing colds is, to harden the body, by enuring it daily to the open air.

I shall put an end to what relates to this part of my subject, by giving an abstract of the justly celebrated advice of Celsus, with respect to the preservation of health. 'A man,' says he, 'who is blessed with good health, should confine himself to no particular rules either with respect to regimen or medicine. He ought frequently to diversify his manner of living; to be sometimes in town, sometimes in the coun-

try ; to hunt, sail, indulge himself in rest, but more frequently to use exercise. He ought to refuse no kind of food that is commonly used, but sometimes to eat more and sometimes less ; sometimes to make one at an entertainment, and sometimes to forbear it ; to make rather two meals a-day than one, and always to eat heartily, provided he can digest it. He ought neither too eagerly to pursue nor too scrupulously to avoid intercourse with the fair sex ; pleasures of this kind rarely indulged, render the body alert and active ; but when too frequently repeated, weak and languid. He should be careful in time of health not to destroy, by excesses of any kind, that vigour of constitution which should support him under sickness.'

PART II.

OF DISEASES.

CHAP. XII.

OF THE KNOWLEDGE AND CURE OF DISEASES.

The cure of diseases does not depend so much upon scientific principles as many imagine. It is chiefly the result of experience and observation. By attending the sick, and carefully observing the various occurrences in diseases, a great degree of accuracy may be acquired, both in distinguishing their symptoms, and in the application of medicines. Hence sensible nurses, and other persons who wait upon the sick, often foresee the patient's fate sooner than those who have been bred to Physic. We do not, however, mean to insinuate that a medical education is of no use: It is doubtless of the greatest importance, but it never can supply the place of observation and experience.

Every disease may be considered as an assemblage of symptoms, and must be distinguished by those which are most obvious and permanent. Instead, therefore, of giving a classical arrangement of diseases, according to the systematic method, it will be more suitable, in a performance of this nature, to give a full and accurate description of each particular disease as it occurs; and where any of the symptoms of one disease have a near resemblance to those of another, to take notice of that circumstance, and at the same time to point out the peculiar or characteristic symptoms by which it may be distinguished. By a due attention to these, the investigation of diseases will be found to be a less difficult matter than most people would at first be ready to imagine.

A proper attention to the patient's age, sex, temper of mind, constitution, and manner of life, will likewise greatly assist, both in the investigation and treatment of diseases.

In childhood, the fibres are lax and soft, the nerves extremely irritable, and the fluids thin: whereas in old age, the fibres are rigid, the nerves become almost insensible, and many of the vessels imperviable. These and other peculiarities render the diseases of the young and aged very different, and of course they must require a different method of treatment.

Females are liable to many diseases which do not afflict the other sex: besides, the nervous system being more irritable in them than in men, their diseases require to be treated with greater caution. They are less able to bear large evacuations; and all stimulating medicines ought to be administered to them with a sparing hand.

Particular constitutions not only dispose persons to peculiar diseases, but likewise render it necessary to treat these diseases in a peculiar manner. A delicate person, for example, with weak nerves, who lives mostly within doors, must not be treated, under any disease, precisely in the same manner as one who is hardy and robust, and who is much exposed to the open air.

The temper and mind ought to be carefully attended to in diseases. Fear, anxiety, and a fretful temper, both occasion and aggravate diseases. In vain do we apply medicines to the body, to remove maladies which proceed from the mind. When it is affected, the best medicine is to soothe the passions, to divert the mind from anxious thought, and to keep the patient as easy and cheerful as possible.

Attention ought likewise to be paid to the climate, or place where the patient lives, the air he breathes, his diet, &c. Such as live in low marshy situations are subject to many diseases which are unknown to the inhabitants of high countries. Those who breathe the impure air of cities, have many maladies to which the more happy rustics are entire strangers. Persons who feed grossly, and indulge in strong liquors, are liable to diseases which do not affect the temperate and abstemious, &c.

It has already been observed, that the different occupations and situations in life dispose men to peculiar diseases. It is therefore necessary to inquire into the patient's occu-

pation, manner of life, &c. This will not only assist us in finding out the disease, but will likewise direct us in the treatment of it. It would be very imprudent to treat the laborious and the sedentary precisely in the same manner, even supposing them to labour under the same disease.

It will likewise be proper to inquire, whether the disease be constitutional or accidental; whether it has been of long or short duration; whether it proceeds from any great and sudden alteration in the diet, manner of life, &c. The state of the patient's body, and of the other evacuations, ought also to be inquired into; and likewise whether he can with ease perform all the vital and animal functions, as breathing, digestion, &c.

Lastly, it will be proper to inquire to what diseases the patient has formerly been liable, and what medicines were most beneficial to him; if he has a strong aversion to any particular drug, &c.

As many of the indications of cure may be answered by diet alone, it is always the first thing to be attended to in the treatment of diseases. Those who know no better imagine that every thing which goes by the name of a medicine possesses some wonderful power or secret charm, and think, if the patient swallows enough of drugs, that he must do well. This mistake has many ill consequences; it makes people trust to drugs, and neglect their own endeavours; besides, it discourages all attempts to relieve the sick where medicines cannot be obtained.

Medicines are no doubt useful in their places; and when administered with prudence, may do much good: but when they are put in place of every thing else, or administered at random, which is not seldom the case, they must do mischief. We would therefore wish to call the attention of mankind from the pursuit of secret medicines, to such things as they are acquainted with. The proper regulation of these may often do much good, and there is little danger of their ever doing hurt.

Every disease weakens the digestive powers. The diet ought, therefore, in all diseases, to be light and of easy digestion. It would be as prudent for a person with a broken leg to attempt to walk, as for one in a fever to eat the same kind of food, and in the same quantity, as when he was in perfect health. Even abstinence alone will often

cure a fever, especially when it has been occasioned by excess in eating or drinking.

In all fevers attended with inflammation, as pleurisies, peripneumonies, &c. thin gruels, wheys, watery infusions of mucilaginous plants, roots, &c. are not only proper for the patient's food, but they are likewise the best medicines that can be administered.

In fevers of a slow, nervous, or putrid kind, where there are no symptoms of inflammation, and where the patient must be supported with cordials, that intention can always be more effectually answered by nourishing diet and generous wines, than by any medicine yet known.

Nor is a proper attention to diet of less importance in chronic than in acute diseases. Persons afflicted with low spirits, wind, weak nerves, and other hypochondriacal affections, generally find more benefit from the use of solid food, and generous liquors, than from all the cordial and carminative medicines which can be administered to them.

The scurvy, that most obstinate malady, will sooner yield to a proper vegetable diet, than to all the boasted antiscorbutic remedies of the shops.

In consumptions, when the humours are vitiated, and the stomach so much weakened as to be unable to digest the solid fibres of animals, or even to assimilate the juices of vegetables, a diet consisting chiefly of *milk* will not only support the patient, but will often cure the disease after every other medicine has failed.

Nor is the attention to other things, of less importance than diet. The strange infatuation which has long induced people to shut up the sick from all communication with the external air, has done great mischief. Not only in fevers, but in many other diseases, the patient will receive more benefit from having the fresh air prudently admitted into his chamber, than from all the medicines which can be given him.

Exercise may likewise in many cases be considered as a medicine: Sailing, or riding on horseback, for example, will be of more service in the cure of consumptions, glandular obstructions, &c. than any medicine yet known. In diseases which proceed from a relaxed state of the solids, the cold bath, and other parts of the gymnastic regimen, will be found equally beneficial.

Few things are of greater importance in the cure of diseases than cleanliness. When a patient is suffered to lie in dirty clothes, whatever perspires from his body is again resorbed, or taken up into it, which serves to nourish the disease and increase the danger. Many diseases may be cured by cleanliness alone ; most of them may be mitigated by it, and in all of them it is highly necessary, both for the patient and those who attend him.

Many other observations, were it necessary, might be adduced to prove the importance of a proper regimen in diseases. Regimen will often cure diseases without medicine, but medicine will seldom succeed where a proper regimen is neglected. For this reason, in the treatment of diseases, we have always given the first place to regimen. Those who are ignorant of medicine, may confine themselves to it only. For others who have more knowledge, we have recommended some of the most simple but approved forms of medicine in every disease. These, however, are never to be administered but by people of better understanding ; nor even by them without the greatest precaution.

It has been objected to this book, that the observations on the prevention and cure of diseases serve only to encourage the fatal practice of domestic quackery. Such objections, however, are equally at variance with candour and truth, and must proceed from ignorance of its contents, or a desire to mislead. The obvious tendency of the book is to enlighten the minds of the people on a subject of such immediate concern as their health, and thus to guard them against the bad effects of ignorance and rashness on their own part, and of impudence and deceit on the part of others. Instead of encouraging the use of medicine, every person of common understanding who attends to the remarks it contains, will feel his caution increased against the use of the most simple medicines, instead of running the risk of poisoning himself or his family, by drugs and dangerous compounds from the apothecary's shop, upon every trifling occasion.

One of the chief objects of the author was to explode as much as possible the use of medicine, and to direct general attention to the more assured means of preserving health, namely, pure air, cleanliness, diet, moderate exercise, and the control of the passions ; knowing how much easier it is to prevent diseases than to cure them. In cases

of actual infirmity and disease, it is recommended to such as are ignorant of physic, to confine themselves to regimen only, and to leave the medical treatment of their complaints to persons of better information. The remedies recommended are safe, and though written in plain English, will be found as effectual and salutary as if written in the jargon of apothecaries' Latin, accompanied with all their barbarous hieroglyphics.

CHAP. XIII.

OF FEVERS IN GENERAL.

As more than one half of mankind is said to perish by fevers, it is of importance to be acquainted with their causes. The most general causes of fevers are, *infection*, *errors in diet*, *unwholesome air*, *violent emotions of the mind*, *excess or suppression of usual evacuations*, *external or internal injuries*, *and extreme degrees of heat or cold.* As most of these have already been treated of at considerable length, and their effects shown, we shall not now resume the consideration of them, but shall only recommend it to all, as they would wish to avoid fevers and other fatal diseases, to pay the most punctual attention to these articles.

Fevers are not only the most frequent of all diseases, but they are likewise the most complex. In the most simple species of fever there is always a combination of several different symptoms. The distinguishing symptoms of fever are, *increased heat*, *frequency of pulse*, *loss of appetite*, *general debility*, *pain in the head*, *and a difficulty in performing some of the vital or animal functions.* The other symptoms usually attendant on fevers are, nausea, thirst, anxiety, delirium, weariness, wasting of the flesh, want of sleep, or the sleep disturbed and not refreshing.

When the fever comes on gradually, the patient generally complains first of languor, or listlessness, soreness of the flesh or the bones, as the country people express it, heaviness of the head, loss of appetite, sickness, with clamminess of the mouth; after some time come on excessive heat, violent thirst, restlessness, &c.

When the fever attacks suddenly, it always begins with

an uneasy sensation of excessive cold, accompanied with debility and loss of appetite; frequently the cold is attended with shivering, oppression about the heart, and sickness at stomach, or vomiting.

Fevers are divided into continual, remitting, intermitting, and such as are attended with cutaneous eruption or topical inflammation, as the small pox, erysipelas, &c. By a continual fever is meant that which never leaves the patient during the whole course of the disease, or which shews no remarkable increase or abatement in the symptoms. This kind of fever is likewise divided into acute, slow, and malignant. The fever is called *acute* when its progress is quick, and the symptoms violent; but when these are more gentle, it is generally denominated *slow.* When livid or petechial spots shew a putrid state of the humours, the fever is called *malignant, putrid,* or *petechial.*

A remitting fever differs from a continual only in degree. It has frequent increases and decreases, or exacerbations and remissions, but never wholly leaves the patient during the course of the disease. Intermitting fevers or agues, are those which, during the time that the patient may be said to be ill, have evident intervals or remissions of the symptoms.

As a fever is only an effort of Nature to free herself from an offending cause, it is the business of those who have the care of the sick to observe with diligence which way Nature points, and to endeavour to assist her operations. Our bodies are so framed, as to have a constant tendency to expel or throw off whatever is injurious to health. This is generally done by urine, sweat, stool, expectoration, vomit, or some other evacuation.

There is reason to believe, if the efforts of Nature, at the beginning of a fever, were duly attended to and promoted, it would seldom continue long; but when her attempts are either neglected or counteracted, it is no wonder if the disease prove fatal. There are daily instances of persons who, after catching cold, have all the symptoms of a beginning fever, but by keeping warm, drinking diluting liquors, bathing their feet in warm water, &c. the symptoms in a few hours disappear, and the danger is prevented. When fevers of a putrid kind threaten, the best method of obviating their effects is by repeated vomits.

Our design is not to enter into a critical inquiry into the

nature and immediate causes of fevers, but to mark their most obvious symptoms, and to point out the proper treatment of the patient with respect to his diet, drink, air, &c. in the different stages of the disease. In these articles the inclinations of the patient will in a great measure direct our conduct.

Almost every person in a fever complains of great thirst, and calls out for drink, especially of a cooling nature. This at once points out the use of water, and other cooling liquors. What is so likely to abate the heat, attenuate the humours, remove spasms and obstructions, promote perspiration, increase the quantity of urine, and in short produce every salutary effect in an ardent or inflammatory fever, as drinking plentifully of water, thin gruel, or any other weak liquor, of which water is the basis? The necessity of diluting liquors is pointed out by the dry tongue, the parched skin, and the burning heat, as well as by the unquenchable thirst of the patient.

Many cooling liquors, which are extremely grateful to patients in a fever, may be prepared from fruits, as decoctions of tamarinds, apple-tea, orange-whey, and the like. Mucilaginous liquors might also be prepared from marshmallow roots, linseed, lime-tree buds, and other mild vegetables. These liquors, especially when acidulated, are highly agreeable to the patient, and should never be denied him.

At the beginning of a fever, the patient generally complains of great lassitude or weariness, and has no inclination to move. This evidently shews the propriety of keeping him easy, and if possible, in bed. Lying in bed relaxes the spasms, abates the violence of circulation, and gives Nature an opportunity of exerting all her force to overcome the disease. The bed alone would often remove a fever at the beginning; but when the patient struggles with the disease, instead of driving it off, he only fixes it the deeper, and renders it more dangerous. This observation is too often verified in travellers, who happen when on a journey to be seized with a fever. Their anxiety to get home, induces them to travel with the fever upon them; which conduct seldom fails to render it fatal.

In fevers, the mind as well as the body should be kept easy. Company is seldom agreeable to the sick. Indeed

every thing that disturbs the imagination increases the disease: for which reason every person in a fever ought to be kept perfectly quiet, and neither allowed to see nor hear any thing that may in the least affect or discompose the mind.

Though the patient in a fever has the greatest inclination for drink, yet he seldom has any appetite for solid food: hence the impropriety of urging him to take victuals is evident. Much solid food in a fever is every way hurtful. It oppresses nature, and, instead of nourishing the patient, serves only to feed the disease. What food the patient takes, should be in small quantity, light, and of easy digestion. It ought to be chiefly of the vegetable kind, as panado, roasted apples, gruels, and such like.

Poor people, when any of their family are taken ill, run directly to their rich neighbours for cordials, and pour wine, spirits, &c. into the patient, who perhaps never had been accustomed to taste such liquors when in health. If there be any degree of fever, this conduct must increase it; and if there be none, this is the ready way to raise one. Stuffing the patient with sweetmeats, and other delicacies, is likewise very pernicious. These are always harder to digest than common food, and cannot fail to hurt.

Nothing is more desired by a patient in a fever, than fresh air. It not only removes his anxiety, but cools the blood, revives the spirits, and proves every way beneficial. Many patients are in a manner stifled to death in fevers for want of fresh air; yet such is the unaccountable infatuation of most people, that the moment they think a person in a fever, they imagine he should be kept in a close chamber, into which not one particle of fresh air must be admitted. Instead of this, there ought to be a constant stream of fresh air into a sick person's chamber, so as to keep it moderately cool. Indeed, its degrees of warmth ought never to be greater than is agreeable to one in perfect health.

Nothing spoils the air of a sick person's chamber, or hurts the patient more, than a number of people breathing in it. When the blood is inflamed, or the humours in a putrid state, air that has been breathed repeatedly will greatly increase the disease. Such air not only loses its spring, and becomes unfit for the purpose of respiration, but acquires a noxious quality, which renders it in a manner poisonous to the sick.

In fevers, when the patient's spirits are low and depressed, he is not only to be supported with cordials, but every method should be taken to cheer and comfort his mind. Many, from a mistaken zeal, when they think a person in danger, instead of solacing his mind with the hopes and consolations of religion, frighten him with the views of hell and damnation. It would be unsuitable here to dwell upon the impropriety and dangerous consequences of this conduct; it often hurts the body, and there is reason to believe, seldom benefits the soul.

Among common people, the very name of a fever generally suggests the necessity of bleeding. This notion seems to have taken its rise from most fevers in this country having been formerly of an inflammatory nature; but true inflammatory fevers are now seldom to be met with. Sedentary occupations, and a different manner of living, have so changed the state of diseases in Britain, that there is now hardly one fever in ten where the lancet is necessary. In most low, nervous, and putrid fevers, which are now so common, bleeding is really hurtful, as it weakens the patient, sinks his spirits, &c. We would recommend this general rule, never to bleed at the beginning of a fever, unless there be evident signs of inflammation. Bleeding is an excellent medicine when necessary, but should never be wantonly performed.

It is likewise a common notion, that sweating is always necessary in the beginning of a fever. When the fever proceeds from an obstructed perspiration, this notion is not ill founded. If the patient only lie in bed, bathe his feet and legs in warm water, and drink plentifully of warm water-gruel, or any other weak diluting liquor, he will seldom fail to perspire freely. The warmth of the bed, and the diluting drink, will relax the universal spasm, which generally affects the skin at the beginning of a fever: it will open the pores, and promote the perspiration, by means of which the fever may often be carried off. But instead of this, the common practice is to heap clothes upon the patient, and to give him things of a hot nature, as spirits, spiceries, &c. which fire his blood, increase the spasms, and render the disease more dangerous.

In all fevers, a proper attention should be paid to the patient's longings. These are the calls of Nature, and often

point out what may be of real use. Patients are not indeed to be indulged in every thing that the sickly appetite may crave; but it is generally right to let them have a little of what they eagerly desire, though it may not seem altogether proper. What the patient longs for, his stomach will generally digest; and such things have sometimes a very happy effect.

When a patient is recovering from a fever, great care is necessary to prevent a relapse. Many persons, by too soon imagining themselves well, have lost their lives, or contracted other diseases of an obstinate nature. As the body after a fever is weak and delicate, it is necessary to guard against catching cold. Moderate exercise in the open air will be of use, but great fatigue is by all means to be avoided: agreeable company will also have a good effect. The diet must be light, but nourishing. It should be taken frequently, but in small quantities. It is dangerous, at such a time, to eat as much as the stomach may crave.

It is impossible to find any remedy adapted to the variety of fevers that afflict the human body, or, indeed, to the different symptoms of any one of them. Yet for half a century, a powder said to possess great virtue in the cure of fevers, has been swallowed in great quantities in this country. It has likewise been carried to every part of the globe, and great cures attributed to it, with what truth we will not pretend to say. Bleeding was at one time equally prevalent, and fashion reigns in physic with as arbitrary sway as in the most indifferent and trivial matters.

This powder, like other quack-medicines, is not confined to the cure of fevers, but is used in many other complaints. Some people look upon it as an universal remedy, and keep it by them in case of emergencies; the fatal effects that must attend such credulity, are obvious to every one possessed of the least reflection. Fevers require to be carefully watched in their progress, in order to enable even the most skilful physicians to adapt the regimen and medicines to their different changes and symptoms as they occur. To talk, therefore, of an universal remedy in fevers, is the extreme of absurdity.

CHAP. XIV.

OF INTERMITTING FEVERS, OR AGUES.

INTERMITTING fevers afford the best opportunity both of observing the nature of a fever, and also the effects of medicine. No person can be at a loss to distinguish an intermitting fever from any other, and the proper medicine for it is now almost universally known.

The several kinds of intermitting fevers take their names from the period in which the fit returns, as quotidian, tertian, quartan, &c.

CAUSES.—Agues are occasioned by effluvia from putrid stagnating water. This is evident from their abounding in rainy seasons, and being most frequent in countries where the soil is marshy, as in Holland, the Fens of Cambridgeshire, the Hundreds of Essex, &c. This disease may also be occasioned by eating too much stone fruit, by a poor, watery diet, damp houses, evening dews, lying upon the damp ground, watching, fatigue, depressing passions, and the like. When the inhabitants of a high country remove to a low one, they are generally seized with intermitting fevers, and to such the disease is most apt to prove fatal. In a word, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

SYMPTOMS.—An intermitting fever generally begins with a pain of the head and loins, weariness of the limbs, coldness of the extremities, stretching, yawning, with sometimes great sickness and vomiting; to which succeed shivering and violent shaking. Afterwards the skin becomes moist, and a profuse sweat breaks out, which generally terminates the fit or paroxysm. Sometimes indeed the disease comes on suddenly, when the person thinks himself in perfect health; but it is more commonly preceded by listlessness, loss of appetite, and the symptoms mentioned above.

REGIMEN.—While the fit continues, the patient ought to drink freely of water-gruel, orange-whey, weak camomile-tea; or, if his spirits be low, small wine-whey, sharpened with the juice of lemon. All his drink should be warm, as

that will assist in bringing on the sweat, and consequently shorten the paroxysm.*

Between the paroxysms, the patient must be supported with food that is nourishing, but light and of easy digestion, as veal or chicken broths, sago-gruel with a little wine, light puddings, and such like. His drink may be small negus, acidulated with the juice of lemons and oranges, and sometimes a little weak punch. He may likewise drink infusions of bitter herbs, as camomile, wormwood, or water-trefoil, and may now and then take a glass of small wine, in which gentian root, centuary, or some other bitter, has been infused.

As the chief intentions of cure in an ague are to brace the solids, and promote perspiration, the patient ought to take as much exercise between the fits as he can bear. If he be able to go abroad, riding on horseback, or in a carriage, will be of great service. But if he cannot bear that kind of exercise, he ought to take such as his strength will permit. Nothing tends more to prolong an intermitting fever, than indulging a lazy indolent disposition.

Intermitting fevers, under a proper regimen, will often go off without medicine: and when the disease is mild, in an open dry country, there is seldom any danger from allowing it to take its course; but when the patient's strength seems to decline, or the paroxysms are so violent that his life is in danger, medicine ought immediately to be administered. This, however, should never be done till the patient has had several fits of shaking and sweating.

Medicine.—The first thing to be done in the cure of an intermitting fever, is to cleanse the stomach and bowels. This not only renders the application of other medicines more safe, but likewise more efficacious. In this disease, the stomach is generally loaded with cold viscid phlegm, and frequently great quantities of bile are discharged by vomit; which plainly points out the necessity of such evacuations. Vomits are therefore to be administered before the patient takes any other medicine. A dose of ipecacuanha will generally answer this purpose very well. A scru-

* Dr Lind says, that twenty or twenty-five drops of laudanum put into a cup of the patient's drink, and given about half an hour after the commencement of the hot fit, promotes the sweat, shortens the fit, relieves the head, and tends greatly to remove the disease.

ple or half a drachm of the powder will be sufficient for an adult, and for a younger person the dose must be less in proportion. After the vomit begins to operate, the patient ought to drink plentifully of weak camomile-tea. The vomit should be taken two or three hours before the return of the fit, and may be repeated at the distance of two or three days. Vomits not only cleanse the stomach, but increase the perspiration, and all the other secretions, which render them of such importance, that they often cure intermitting fevers without the assistance of any other medicine.

Purging medicines are likewise useful and often necessary in intermitting fevers. A smart purge has been known to cure an obstinate ague, after the Peruvian bark and other medicines had been used in vain. Vomits, however, are more suitable in this disease, and render purging less necessary; but if the patient be afraid to take a vomit, he ought in this case to cleanse the bowels by a dose or two of Glauber's salt, jalap, or rhubarb.

Bleeding may sometimes be proper at the beginning of an intermitting fever, when excessive heat, a delirium, &c. give reason to suspect an inflammation; but as the blood is seldom in an inflammatory state in intermitting fevers, this operation is rarely necessary. When frequently repeated, it tends to prolong the disease.

After proper evacuations, the patient may safely use the Peruvian bark, which may be taken in any way that is most agreeable to him. No preparation of the bark seems to answer better than the most simple form in which it can be given, viz. in powder.

Two ounces of the best Peruvian bark, finely powdered, may be divided into twenty-four doses. These may either be made into boluses, as they are used, with a little syrup of lemon, or mixed in a glass of red wine, a cup of camomile-tea, water-gruel, or any other drink that is more agreeable to the patient.*

In an ague which returns every day, one of the above doses may be taken every two hours during the interval of

* It has lately been observed, that the red bark is more powerful than that which has for some time been in common use. Its superior efficacy seems to arise from its being of a more perfect growth than the quill-bark, and consequently more fully impregnated with the medical properties of the plant.

the fits. By this method, the patient will be able to take five or six doses between each paroxysm. In a tertian, or third day ague, it will be sufficient to take a dose every third hour during the interval, and in a quartan every fourth. If the patient cannot take so large a dose of the bark, he may divide each of the powders into two parts, and take one every hour, &c. For a young person, a smaller quantity of this medicine will be sufficient, and the dose must be adapted to the age, constitution, and violence of the symptoms.*

The above quantity of bark will frequently cure an ague; the patient, however, ought not to leave off taking the medicine as soon as the paroxysms are stopped, but should continue to use it till there is reason to believe the disease is entirely overcome. Most of the failures in the cure of this disease are owing to patients not continuing to use the medicine long enough. They are generally directed to take it till the fits are stopped, then to leave it off, and begin again at some distance of time; by which means the disease gathers strength, and often returns with as much violence as before. A relapse may always be prevented by the patients continuing to take small doses of the medicine for some time after the symptoms disappear. This is both the most safe and effectual method of cure.

An ounce of gentian root, calamus aromaticus, and orange-peel, of each half an ounce, with three or four handfuls of camomile-flowers, and an handful of coriander-seed, all bruised together in a mortar, may be used in form of infusion or tea. About half an handful of these ingredients may be put into a tea-pot, and an English pint of boiling water poured upon them. A cup of this infusion drank three or four times a-day, will greatly promote the cure. Such patients as cannot drink the watery infusion, may put two handfuls of the same ingredients into a bottle of white wine, and take a glass of it twice or thrice a day. If patients drink freely

* In intermitting fevers of an obstinate nature, I have found it necessary to throw in the bark much faster. Indeed the benefits arising from this medicine depend chiefly upon a large quantity of it being administered in a short time. Several ounces of bark given in a few days, will do more than as many pounds taken in the course of some weeks. When this medicine is intended either to stop a mortification, or cure an obstinate ague, it ought to be thrown in as fast as the stomach can possibly bear it. Inattention to this circumstance has hurt the reputation of one of the best medicines of which we are in possession.

of the above, or any other proper infusion of bitters, a smaller quantity of bark than is generally used will be sufficient to cure an ague.*

Those who cannot swallow the bark in substance, may take it in decoction or infusion. An ounce of bark in powder may be infused in a bottle of white wine for four or five days, frequently shaking the bottle; afterwards let the powder subside, and pour off the clear liquor. A wine-glass may be drank three or four times a-day, or oftener, as there is occasion. If a decoction be more agreeable, an ounce of the bark, and two drams of snake-root bruised, with an equal quantity of salt of wormwood, may be boiled in a quart of water, to an English pint. To the strained liquor may be added an equal quantity of red wine, and a glass of it taken frequently.

In obstinate agues, the bark will be found much more efficacious when assisted by brandy or other warm cordials, than if taken alone. This I have had frequently occasion to observe in a country where intermitting fevers were endemical. The bark seldom succeeded unless assisted by snake-root, ginger, canella alba, or some other warm aromatic. When the fits are very frequent and violent, in which case the fever often approaches towards an inflammatory nature, it will be safer to keep out the aromatics, and to add salt of tartar in their stead. But in an obstinate tertian or quartan, in the end of autumn or beginning of winter, warm and cordial medicines are absolutely necessary.†

As autumnal and winter agues generally prove much more obstinate than those which attack the patient in spring or

* There is reason to believe, that sundry of our own plants or barks which are very bitter and astringent would succeed in the cure of intermitting fevers, especially when assisted by aromatics. But as the Peruvian bark has been long approved in the cure of this disease, and is now to be obtained at a very reasonable rate, it is of less importance to search after new medicines. We cannot, however, omit taking notice, that the Peruvian bark is very often adulterated, and that it requires considerable skill to distinguish between the genuine and the false. This ought to make people very cautious of whom they purchase it.

† In obstinate agues, when the patient is old, the habit phlegmatic, the season rainy, the situation damp, or the like, it will be necessary to mix with two ounces of the bark, half an ounce of Virginian snake-root, and a quarter of an ounce of ginger, or some other warm aromatic; but when the symptoms are of an inflammatory nature, half an ounce of salt of wormwood, or salt of tartar, may be added to the above quantity of bark.

summer, it will be necessary to continue the use of medicines longer in the former than in the latter. A person who is seized with an intermitting fever in the beginning of winter, ought frequently, if the season prove rainy, to take a little medicine, although the disease may seem to be cured, to prevent a relapse, till the return of the warm season. He ought likewise to take care not to be much abroad in wet weather, especially in cold easterly winds.

When agues are not properly cured, they often degenerate into obstinate chronical diseases, as the dropsy, jaundice, &c. For this reason all possible care should be taken to have them radically cured, before the constitution has been too much weakened.

Though nothing is more rational than the method of treating intermitting fevers, yet, by some strange infatuation, more charms and whimsical remedies are daily used for removing this than any other disease. There is hardly an old woman who is not in possession of a nostrum for stopping an ague; and it is amazing with what readiness their pretensions are believed. Those in distress eagerly grasp at any thing that promises sudden relief; but the shortest way is not always the best in the treatment of diseases. The only method to obtain a safe and lasting cure, is gradually to assist Nature in removing the cause of the disorder.

Some indeed try bold, or rather fool-hardy experiments, to cure agues, as drinking great quantities of strong liquors, jumping into a river, taking arsenic, &c. These may sometimes have the desired effect, but must always be attended with danger.* When there is any degree of inflammation, or the least tendency to it, such experiments may prove fatal. The only patient whom I remember to have lost in an intermitting fever, evidently killed himself by drinking strong liquor, which some person had persuaded him would prove an infallible remedy.

Many dirty things are extolled for the cure of intermitting fevers, as spiders, cobwebs, snuffings of candles, &c. Though these may sometimes succeed, yet their very nastiness is sufficient to set them aside, especially when cleanly medicines will answer the purpose better. The only me-

* Arsenic has of late been recommended as an infallible remedy in the ague; but I would advise that it should be used only under the eye of a physician.

dicine that can be depended upon for thoroughly curing an intermittent fever, is the Peruvian bark. It may always be used with safety: and I can honestly declare, that in all my practice I never knew it fail, when combined with the medicines mentioned above, and duly persisted in.

Where agues are endemical, even children are often afflicted with that disease. Such patients are very difficult to cure, as they can seldom be prevailed upon to take the bark, or any other disagreeable medicine. One method of rendering this medicine more palatable, is to make it into a mixture with distilled waters and syrup, and afterwards to give it an agreeable sharpness with the elixir, or spirit of vitriol. This both improves the medicine, and takes off the nauseous taste. In cases where the bark cannot be administered, the *saline mixture* may be given with advantage to children.

Wine-whey is a very proper drink for a child in an ague; to half an English pint of which may be put a tea-spoonful of the spirit of hartshorn. Exercise is likewise of considerable service; and when the disease proves obstinate, the child ought, if possible, to be removed to a warm dry air. The food ought to be nourishing, and sometimes a little generous wine should be allowed.

To children, and such as cannot swallow the bark, or when the stomach will not bear it, it may be given by clyster. Half an ounce of the extract of bark, dissolved in four ounces of warm water, with the addition of half an ounce of sweet oil, and six or eight drops of laudanum, is the form recommended by Dr Lind for an adult, and this to be repeated every fourth hour, or oftener, as the occasion shall require. For children the quantity of extract and laudanum must be proportionably lessened. Children have been cured of agues by making them wear a waistcoat with powdered bark quilted between the folds of it; by bathing them frequently in a strong decoction of the bark, and by rubbing the spine with strong spirits, or with a mixture of equal parts of laudanum and the saponaceous liniment.

We have been the more full upon this disease, because it is very common, and because few patients in an ague

apply to physicians, unless in extremities. There are, however, many cases in which the disease is very irregular, being complicated with other diseases, or attended with symptoms which are both very dangerous and very difficult to understand. All these we have purposely passed over, as they would only bewilder the generality of readers. When the disease is very irregular, or the symptoms dangerous, the patient ought immediately to apply to a physician, and strictly to follow his advice.

To prevent agues, people must endeavour to avoid their causes. These have been already pointed out in the beginning of this section: we shall therefore only add one preventive medicine, which may be of use to such as are obliged to live in low marshy countries, or who are liable to frequent attacks of this disease.

Take an ounce of the best Peruvian bark; Virginian snake-root, and orange-peel, of each half an ounce; bruise them all together, and infuse for five or six days in a bottle of brandy, Holland gin, or any good spirit; afterwards pour off the clear liquor, and take a wine-glass of it twice or thrice a-day. This indeed is recommending a dram; but the bitter ingredients in a great measure take off the ill effects of the spirit. Those who do not chuse it in brandy, may infuse it in wine; and such as can bring themselves to chew the bark, will find that method succeed very well. Gentian-root, or calamus aromaticus, may also be chewed by turns for the same purpose. All bitters seem to be antidotes to agues, especially those that are warm and astringent.

Nothing is more essential in the cure of agues than a change of air, which cannot be too strongly recommended, and without which all the efforts of medical skill are sometimes exerted in vain.

There are few diseases which so many pretend to cure as agues. Many are the imposing specifics handed down from parents to their children, with statements of the cures they have performed after the advice of the most eminent of the faculty had been followed in vain. Persons ignorant of physic, who relate these cures, are not capable of judging how far they were the result of the medicine's operation; they only know that the fits ceased after taking it. Nor are they capable of judging whether their medicine, in stopping the fits, did not introduce into the system vitiated hu-

mours still more dangerous to the constitution. In no case ought such evidence to have any weight in medical experiments; for, without intending it, they are apt to give a false statement, or to assert absurdities unworthy of credit.

CHAP. XV.

OF AN ACUTE CONTINUAL FEVER.

This fever is denominated acute, ardent, or inflammatory. It most commonly attacks the young, or persons about the prime and vigour of life, especially such as live high, abound with blood, and whose fibres are strong and elastic. It seizes people at all seasons of the year; but is most frequent in the spring and beginning of summer.

Causes.—An ardent fever may be occasioned by any thing that overheats the body, or produces plethora, as violent exercise, sleeping in the sun, drinking strong liquors, eating spiceries, a full diet, with little exercise, &c. It may likewise be occasioned by whatever obstructs the perspiration, as lying on the damp ground, drinking cold liquor when the body is hot, night-watching, or the like.

Symptoms.—A rigour or chilliness generally ushers in this fever, which is soon succeeded by great heat, a frequent and full pulse, pain of the head, dry skin, redness of the eyes, a florid countenance, pains in the back, loins, &c. To these succeed difficulty of breathing, sickness, with an inclination to vomit. The patient complains of great thirst, has no appetite for solid food, is restless, and his tongue generally appears black and rough.

A delirium, excessive restlessness, great oppression of the breast, with laborious respiration, starting of the tendons, hiccup, cold clammy sweats, and an involuntary discharge of urine, are very dangerous symptoms.

As this disease is always attended with danger, the best medical assistance ought to be procured as soon as possible. A physician may be of use at the beginning, but his skill is often of no avail afterwards. Nothing can be more unaccountable than the conduct of those who have it in their power, at the beginning of a fever, to procure the best medical assistance, yet put it off till things come to an extre-

mity. When the disease, by delay or wrong treatment, has become incurable, and has exhausted the strength of the patient, it is vain to hope for relief from medicine. Physicians may indeed assist nature; but their attempts must ever prove fruitless, when she is no longer able to co-operate with their endeavours.

Regimen.—From the symptoms of this disease, it is evident, that the blood and other humours require to be attenuated; that the perspiration, urine, saliva, and all the other secretions, are in too small a quantity; that the vessels are rigid, and the heat of the whole body too great; all these clearly point out the necessity of a regimen calculated to dilute the blood, correct the acrimony of the humours, allay the excessive heat, remove the spasmodic stricture of the vessels, and promote the secretions.

These important purposes may be greatly promoted by drinking plentifully of diluting liquors; as water-gruel, or oatmeal-tea, clear whey, barley-water, balm-tea, apple-tea, &c. These may be sharpened with juice of orange, jelly of currants, raspberries, and such like; orange-whey is likewise an excellent cooling drink. It is made by boiling among milk and water a bitter orange sliced till the curd separates. If no orange can be had, a lemon, a little cream of tartar, or a few spoonfuls of vinegar, will have the same effect. Two or three spoonfuls of white wine may occasionally be added to the liquor when boiling.

If the patient be costive, an ounce of tamarinds with two ounces of stoned raisins of the sun, and a couple of figs, may be boiled in three English pints of water to a quart. This makes a very pleasant drink, and may be used at discretion. The common pectoral decoction is likewise a very proper drink in this disease. A tea-cupful of it may be taken every two hours, or oftener, if the patient's heat and thirst be very great.

The above liquids must all be drank a little warm. They may be used in smaller quantities at the beginning of a fever, but more freely afterwards, in order to assist in carrying off the disease by promoting the different excretions. We have mentioned a variety of drinks, that the patient may have it in his power to choose those which are most agreeable, and that, when tired of one, he may have recourse to another.

The patient's diet must be very spare and light. All sorts of flesh meats, and even chicken-broths, are to be avoided. He may be allowed groat-gruel, panado, or light bread boiled in water; to which may be added a few grains of common salt, and a little sugar, which will render it more palatable. He may eat roasted apples with a little sugar, toasted bread with jelly of currants, boiled prunes, &c.

It will greatly relieve the patient, especially in an hot season, to have fresh air frequently let into his chamber. This however must always be done in such a manner as not to endanger his catching cold.

It is too common in fevers to load the patient with bed-clothes under the pretence of making him sweat, or defending him from the cold. This custom has many ill effects. It increases the heat of the body, fatigues the patient, and retards instead of promoting the perspiration.

Sitting upright in bed, if the patient be able to bear it, will often have a good effect. It relieves the head, by retarding the motion of the blood to the brain. But this posture ought never to be continued too long; and if the patient be inclined to sweat, it will be more safe to let him lie, only raising his head a little with pillows.

Sprinkling the chamber with vinegar, juice of lemon, or vinegar and rose-water, with a little nitre dissolved in it, will greatly refresh the patient. This ought to be done frequently, especially if the weather be hot.

The patient's mouth should be often washed with a mixture of water and honey, to which a little vinegar may be added, or with a decoction of figs in barley water. His feet and hands ought likewise frequently to be bathed in lukewarm water, especially if the head be affected.

The patient should be kept as quiet and easy as possible. Company, noise, and every thing that disturbs the mind, is hurtful. Even too much light, or any thing that affects the senses, ought to be avoided. His attendants should be as few as possible, and they ought not to be too often changed. His inclinations ought rather to be soothed than contradicted; even the promise of what he craves will often satisfy him as much as its reality.

Medicine.—In this and all other fevers, attended with a hard, full, quick pulse, bleeding is of the greatest importance. This operation ought always to be performed as soon

as the symptoms of an inflammatory fever appear. The quantity of blood to be taken away, however, must be in proportion to the strength of the patient and the violence of the disease. If after the first bleeding the fever should increase, and the pulse become more frequent and hard. there will be a necessity for repeating it a second, and perhaps a third, or even a fourth time, which may be done at the distance of twelve, eighteen, or twenty-four hours from each other, as the symptoms require. If the pulse continue soft, and the patient be tolerably easy after the first bleeding, it ought not to be repeated.

If the heat and fever be very great, forty or fifty drops of the dulcified or sweet spirit of nitre may be made into a draught, with an ounce of rose-water, two ounces of common water, and half an ounce of simple syrup, or a bit of loaf sugar. This draught may be given to the patient every three or four hours when the fever is violent; afterwards once in five or six hours will be sufficient.

If the patient be afflicted with retching, or an inclination to vomit, it will be right to assist Nature's attempts by giving him weak camomile-tea or lukewarm water to drink.

If the body be bound, a clyster of milk and water, with a little salt, and a spoonful of sweet oil or fresh butter in it, ought daily to be administered. Should this not have the desired effect, a tea-spoonful of magnesia alba, or cream of tartar, may be frequently put into his drink. He may likewise eat tamarinds, boiled prunes, roasted apples, and the like.

If about the tenth, eleventh, or twelfth day, the pulse become more soft, the tongue moister, and the urine begins to let fall a reddish sediment, there is reason to expect a favourable issue to the disease. But if, instead of these symptoms, the patient's spirits grow languid, his pulse sinks, and his breathing becomes difficult, with a stupor, trembling of the nerves, starting of the tendons, &c. there is reason to fear that the consequences will be fatal. In this case blistering-plasters must be applied to the head, ancles, inside of the legs or thighs, as there may be occasion; poultices of wheat bread, mustard, and vinegar, may likewise be applied to the soles of the feet, and the patient must be supported with cordials, as strong wine-whey, negus, sago-gruel with wine in it, and such like.

A proper regimen is not only necessary during the fever,

but likewise after the patient begins to recover. By neglecting this, many relapse, or fall into other diseases, and continue valetudinary for life. Though the body be weak after a fever, yet the diet for some time ought to be rather light than of too nourishing a nature. Too much food, drink, exercise, company, &c. are carefully to be avoided. The mind ought likewise to be kept easy, and the patient should not attempt to pursue study, or any business that requires intense thinking.

If the digestion be bad, or the patient be seized at times with feverish heats, an infusion of Peruvian bark in cold water will be of use. It will strengthen the stomach, and help to subdue the remains of the fever.

When the patient's strength is pretty well recovered, he ought to take some gentle laxative. An ounce of tamarinds and a dram of senna may be boiled for a few minutes in an English pint of water, and an ounce of manna dissolved in the decoction; afterwards it may be strained, and a tea-cupful drank every hour till it operates. This dose may be repeated twice or thrice, five or six days intervening.

Those who follow laborious employments ought not to return too soon to their labour after a fever, but should keep easy till their strength and spirits are sufficiently recruited.

The body as well as the mind requires indulgence after this severe disease; but it is often difficult to prevent people from eating and drinking to excess. The appetite is unusually voracious on recovering from most fevers, and without the greatest self-command a relapse is to be apprehended, as well as worse consequences, such as boils, ulcers, and settled swellings of the limbs. The diet ought to be light, principally vegetables, with a little animal food of easy digestion.

On the first appearance of a fever the best medical assistance ought to be procured, before it becomes incurable by delay or wrong treatment. Many fall victims to their obstinacy in persisting to struggle against the disease without taking to their bed, which would in many cases stop a beginning fever; struggling to keep on their legs inevitably increases its force. Others, on the first alarm, employ hot and volatile sudorifics, shutting out the air from their chambers, and smothering themselves up in bed under enormous loads of clothes, in order to excite sweats. By these means the

fever is increased, and sweating and every other evacuation prevented. Diluting liquors, while they quench the patient's thirst, and ease the pains of the breast and difficulty of breathing, are the best means of promoting perspiration. The ravages of fevers, in themselves too fatal to the human race, are thus often increased by the ignorance and misconduct of the unhappy sufferers themselves.

CHAP. XII.

OF THE PLEURISY.

The true pleurisy is an inflammation of that membrane called the *pleura*, which lines the inside of the breast. It is distinguished into the moist and dry. In the former the patient spits freely; in the latter, little or none at all. There is likewise a species of this disease, which is called the *spurious* or *bastard pleurisy*, in which the pain is more external, and chiefly affects the muscles between the ribs. The pleurisy prevails among labouring people, especially such as work without doors, and are of a sanguine constitution. It is most frequent in the spring season.

Causes.—The pleurisy may be occasioned by whatever obstructs the perspiration; as cold northerly winds; drinking cold liquors when the body is hot; sleeping without doors on the damp ground; wet clothes; plunging the body into cold water, or exposing it to the cold air, when covered with sweat, &c. It may likewise be occasioned by drinking strong liquors; by the stoppage of usual evacuations, as old ulcers, issues, sweating of the feet or hands, &c.; the sudden striking in of any eruption, as the itch, the measles, or the small pox. Those who have been accustomed to bleed at a a certain season of the year, are apt, if they neglect it, to be seized with a pleurisy. Keeping the body too warm by means of fire, clothes, &c. renders it more liable to this disease. A pleurisy may likewise be occasioned by violent exercise, as running, wrestling, leaping, or by supporting great weight, blows on the breast, &c. A bad conformation of the body renders persons more liable to this disease, as a narrow chest, a straitness of the arteries of the pleura, &c.

Symptoms.—This, like most other fevers, generally begins with chilliness and shivering, which are followed by heat, thirst, and restlessness. To these succeeds a violent pricking pain in one of the sides among the ribs. Sometimes the pain extends towards the back-bone, sometimes towards the forepart of the breast, and at other times towards the shoulder blades. The pain is generally most violent when the patient draws his breath.

The pulse in this disease is commonly quick and hard, the urine high coloured; and, if blood be let, it is covered with a tough crust, or buffy coat. The patient's spittle is at first thin, but afterwards it becomes grosser, and is often streaked with blood.

Regimen.—Nature generally endeavours to carry off this disease by a critical discharge of blood from some part of the body, by expectoration, sweat, loose stools, thick urine, or the like. We ought therefore to second her intentions by lessening the force of the circulation, relaxing the vessels, diluting the humours, and promoting expectoration.

For these purposes, the diet, as in the former disease, ought to be cool, slender, and diluting. The patient must avoid all food that is viscid, hard of digestion, or that affords much nourishment; as flesh, butter, cheese, eggs, milk, and also every thing that is of a heating nature. His drink may be whey, or an infusion of pectoral and balsamic vegetables.

Barley-water, with a little honey or jelly of currants mixed with it, is likewise a very proper drink in this disease. It is made by boiling an ounce of pearl barley in three English pints of water to two, which must afterwards be strained. The decoction of figs, raisins, and barley, recommended in the preceding disease, is here likewise very proper. These and other diluting liquors are not to be drank in large quantities at a time; but the patient ought to keep continually sipping them, so as to render his mouth and throat always moist. All his food and drink should be taken a little warm.

The patient should be kept quiet, cool, and every way easy, as directed under the foregoing disease. His feet and hands ought daily to be bathed in lukewarm water; and he may sometimes sit up in his bed for a short space, in order to relieve his head.

MEDICINE.—Almost every person knows, when a fever is attended with a violent pain of the side, and a quick hard pulse, that bleeding is necessary. When these symptoms come on, the sooner this operation is performed the better; and the quantity at first must be pretty large, provided the patient be able to bear it. A large quantity of blood let at once in the beginning of a pleurisy, has a much better effect than repeated small bleedings. A man may lose twelve or fourteen ounces of blood as soon as it is certainly known that he is seized with a pleurisy. For a younger person, or one of a delicate constitution, the quantity must be less.

If, after the first bleeding, the stitch, with the other violent symptoms, should still continue, it will be necessary, at the distance of twelve or eighteen hours, to let eight or nine ounces more. If the symptoms do not then abate, and the blood shews a strong buffy coat, a third or even a fourth bleeding may be requisite. If the pain of the side abate, the pulse become softer, or the patient begin to spit freely, bleeding ought not to be repeated. This operation is seldom necessary after the third or fourth day of the fever, and ought not then to be performed, unless in the most urgent circumstances.

The blood may be many ways attenuated without bleeding. There are likewise many things that may be done to ease the pain of the side without this operation, as fomenting, blistering, &c. Fomentations may be made by boiling a handful of flowers of elder, camomile, and common mallows, or any other soft vegetables, in a proper quantity of water. The herbs may be either put into a flannel bag, and applied warm to the side, or flannels may be dipped in the decoction, afterwards wrung out, and applied to the part affected, with as much warmth as the patient can easily bear. As the cloths grow cool, they must be changed, and great care taken that the patient do not catch cold. A bladder may be filled with warm milk and water, and applied to the side, if the above method of fomenting be found inconvenient. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humours. The side may likewise be frequently rubbed with a little of the volatile liniment.

Topical bleeding has often a very good effect in this disease. It may either be performed by applying a number of

leeches to the part affected, or by cupping, which is both a more certain and expeditious method than the other.

Leaves of various plants might likewise be applied to the patient's side with advantage. I have often seen great benefit from young cabbage leaves applied warm to the side in a pleurisy. These not only relax the parts, but likewise draw off a little moisture, and may prevent the necessity of blistering plasters: which, however, when other things fail, must be applied.

If the stitch continue after repeated bleedings, fomentations, &c. a blistering-plaster must be applied over the part affected, and suffered to remain for two days. This not only procures a discharge from the side, but takes off the spasm, and by that means assists in removing the cause of the disease. To prevent a strangury when the blistering plaster is on, the patient may drink freely of the Arabic emulsion.

If the patient be costive, a clyster of thin water-gruel, or of barley-water, in which a handful of mallows, or any other emollient vegetable, has been boiled, may be daily administered. This will not only empty the bowels, but have the effect of a warm fomentation applied to the inferior viscera, which will help to make a derivation from the breast.

The expectoration may be promoted by sharp, oily, and mucilaginous medicines. For this purpose, an ounce of the oxymel, or the vinegar of squills, may be added to six ounces of the pectoral decoction, and two table-spoonfuls of it taken every two hours.

Should the squill disagree with the stomach, the oily emulsion may be administered; or in place of it, two ounces of the oil of sweet almonds, or oil of olives, and two ounces of the syrup of violets, may be mixed with as much sugar-candy powdered as will make an electuary of the consistence of honey. The patient may take a tea spoonful of this frequently, when the cough is troublesome. Should oily medicines prove nauseous, which is sometimes the case. two table-spoonfuls of the solution of gum ammoniac in barley-water may be given three or four times a day.

If the patient do not perspire, but has a burning heat upon his skin, and passes very little water, some small doses of purified nitre and camphire will be of use. Two drams of the former may be rubbed with five or six grains of the latter in a mortar, and the whole divided into six doses,

one of which may be taken every five or six hours in a little of the patient's ordinary drink.

We shall only mention one medicine more, which some reckon almost a specific in the pleurisy, viz. the decoction of the seneka rattle-snake root. After bleeding and other evacuations have been premised, the patient may take two, three, or four table-spoonfuls of this decoction, according as his stomach will bear it, three or four times a-day. If it should occasion vomiting, two or three ounces of simple cinnamon-water may be mixed with the quantity of decoction here directed; or it may be taken in smaller doses. As this medicine promotes perspiration and urine, and likewise keeps the body easy, it may be of some service in a pleurisy, or any other inflammation of the breast.

No one will imagine that these medicines are all to be used at the same time. We have mentioned different things, on purpose that people may have it in their power to chuse; and likewise, that when one cannot be obtained, they may make use of another. Different methods are no doubt necessary in the different periods of a disorder; and where one fails of success, or disagrees with the patient, it will be proper to try another.

What is called the crisis, or height of the fever, is sometimes attended with very alarming symptoms, as difficulty of breathing, an irregular pulse, convulsive motions, &c. These are apt to frighten the attendants, and induce them to do improper things, as bleeding the patient, giving him strong stimulating medicines, or the like. But they are only the struggles of Nature to overcome the disease, in which she ought to be assisted by plenty of diluting drink, which is then peculiarly necessary. If the patient's strength, however, be much exhausted by the disease, it will be necessary at this time to support him with frequent small draughts of wine-whey, negus, or the like.

When the pain and fever are gone, it will be proper, after the patient has recovered sufficient strength, to give him some gentle purges, as those directed towards the end of an acute continual fever. He ought likewise to use a light diet of easy digestion, and his drink should be butter-milk, whey, and other things of a cleansing nature.

Of the Bastard Pleurisy.

That species of pleurisy which is called the *bastard* or *spurious*, generally goes off by keeping warm for a few days, drinking plenty of diluting liquors, and observing a cooling regimen.

It is known by a dry cough, a quick pulse, and a difficulty of lying on the affected side; which last does not always happen in the true pleurisy. Sometimes, indeed, this disease proves obstinate, and requires bleeding, with cupping, and scarifications of the part affected. These, together with the use of nitrous and other cooling medicines, seldom fail to effect a cure.

Of the Paraphrenitis.

The *paraphrenitis*, or inflaunmation of the diaphragm, is so nearly connected with the pleurisy, and resembles it so much in the manner of treatment, that it is scarcely necessary to consider it as a separate disease.

It is attended with a very acute fever, and extreme pain in the part affected, which is generally augmented by coughing, sneezing, drawing in the breath, taking food, going to stool, making water, &c. Hence the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm; is restless, anxious, has a dry cough, a hiccup, and often a delirium. A convulsive laugh, or rather a kind of involuntary grin, is no uncommon symptom of this disease.

Every method must be taken to prevent a suppuration, as it is impossible to save the patient's life when this happens. The regimen and medicine are in all respects the same as in the pleurisy. We shall only add, that in this disease, emollient clysters are particularly useful, as they relax the bowels, and by that means make a derivation from the part affected.

CHAP. XVII.

OF A PERIPNEUMONY, OR INFLAMMATION OF THE LUNGS.

As this disease affects an organ which is absolutely necessary to life, it must always be attended with danger.

Persons who abound with thick blood, whose fibres are tense and rigid, who feed upon gross aliment and drink strong viscid liquors, are most liable to a peripneumony. It is generally fatal to those who have a flat breast, or narrow chest, and to such as are afflicted with an asthma, especially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only, at other times the whole of the organ is affected; in which case the disease can hardly fail to prove fatal.

When the disease proceeds from a viscid pituitous matter obstructing the vessels of the lungs, it is called a *spurious* or *bastard peripneumony*. When it arises from a thin acrid defluxion on the lungs, it is denominated a *catarrhal peripneumony*, &c.

Causes.—An inflammation of the lungs is sometimes a primary disease, and sometimes it is the consequence of other diseases, as a quinsey, a pleurisy, &c. It proceeds from the same causes as a pleurisy, viz. an obstructed perspiration from cold, wet clothes, &c. or from an increased circulation of the blood by violent exercise, the use of spiceries, ardent spirits, and such like. The pleurisy and peripneumony are often complicated; in which case the disease is called a *pleuro-peripneumony*.

Symptoms.—Most of the symptoms of a pleurisy likewise attend an inflammation of the lungs; only in the latter the pulse is more soft, and the pain less acute; but the difficulty in breathing, and oppression of the breast, are generally greater.

Regimen.—As the regimen and medicine are in all respects the same in the true peripneumony as in the pleurisy, we shall not here repeat them, but refer the reader to the treatment of that disease. It may not, however, be improper to add, that the aliment ought to be more slender and thin in this than in any other inflammatory disease. The learned Dr Arbuthnot asserts, that even common whey is sufficient to support the patient, and that decoctions of barley, and infusions of fennel roots in warm water with milk, are the most proper both for drink and nourishment. He likewise recommends the steam of warm water taken in by the breath, which serves as a kind of internal fomentation, and helps to attenuate the impacted humours. If the patient has loose stools, but is not weakened by them, they

are not to be stopped, but rather promoted by the use of emollient clysters.

It has already been observed, that the *spurious* or *bastard* peripneumony is occasioned by a viscid pituitous matter obstructing the vessels of the lungs. It commonly attacks the old, infirm, and phlegmatic, in winter and wet seasons.

The patient, at the beginning, is cold and hot by turns, has a small quick pulse, feels a sense of weight upon his breast, breathes with difficulty, and sometimes complains of a pain and giddiness of his head. His urine is usually pale, and his colour very little changed.

The diet, in this as well as in the true peripneumony, must be very slender, as weak broths, sharpened with the juice of orange or lemon, and such like. His drink may be thin water-gruel sweetened with honey, or a decoction of the roots of fennel, liquorice, and quick-grass. An ounce of each of these may be boiled in three English pints of water to a quart, and sharpened with a little currant-jelly, or the like.

Bleeding and purging are generally proper at the beginning of this disease; but if the patient's spittle be pretty thick, or well concocted, neither of them are necessary. It will be sufficient to assist the expectoration by some of the sharp medicines recommended for that purpose in the pleurisy, as the solution of gum-ammoniac with oxymel of squills, &c. Blistering plasters have generally a good effect, and ought to be applied pretty early.

If the patient do not spit he must be bled, according as his strength will permit, and have a gentle purge administered. Afterwards his body may be kept open by clysters, and the expectoration promoted, by taking every four hours two table spoonfuls of the solution mentioned above.

When an inflammation of the breast does not yield to bleeding, blistering, and other evacuations, it commonly ends in suppuration, which is more or less dangerous, according to the part where it is situated. When this happens in the pleura, it sometimes breaks outwardly, and the matter is discharged by the wound.

When the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but if the matter floats in the cavity of the breast between the pleura and the lungs, it can only be discharged by an incision made betwixt the ribs.

If the patient's strength do not return after the inflammation is to all appearance removed; if his pulse continue quick though soft, his breathing difficult and oppressed; if he have cold shiverings at times, his cheeks flushed, his lips dry: and if he complain of thirst, and want of appetite, there is reason to fear a suppuration, and that a phthisis or consumption of the lungs will ensue. We shall therefore next proceed to consider the proper treatment of that disease.

CHAP. XVIII.

OF CONSUMPTIONS.

A CONSUMPTION is a wasting or decay of the whole body, from an ulcer, tubercles, or concretion of the lungs, an empyema, a nervous atrophy, or cachexy.

Dr Arbuthnot observes, that in his time consumptions made up above one-tenth part of the bills of mortality in and about London. There is reason to believe they have rather increased since; and we know from experience, that they are not less fatal in some other towns of England than in London.

Young persons, between the age of fifteen and thirty, of a slender make, long neck, high shoulders, and flat breasts, are most liable to this disease.

Consumptions prevail more in England than in any other part of the world, owing perhaps to the great use of animal food and malt liquors, the general application to sedentary employments, and the great quantity of pit-coal which is there burnt, to which we may add, the perpetual changes in the atmosphere, or variableness of the weather.

CAUSES.—It has already been observed, that an inflammation of the breast often ends in an imposthume: consequently, whatever disposes people to this disease must likewise be considered as a cause of consumption.

Other diseases, by vitiating the habit, may likewise occasion consumptions; as the scurvy, the scrophula, or king's-evil, the venereal disease, the asthma, small-pox, measles, &c.

As this disease is seldom cured, we shall endeavour the

more particularly to point out its causes, in order that people may be enabled to avoid it. These are:

——Confined or unwholesome air: when this fluid is impregnated with the fumes of metals or minerals, it proves extremely hurtful to the lungs, and often corrodes the tender vessels of that necessary organ.

——Violent passions, exertions, or affections of the mind; as grief, disappointment, anxiety, or close application to the study of abstruse arts or sciences.

——Great evacuations; as sweating, diarrhœas, diabetes, excessive venery, the fluor albus, an over-discharge of the menstrual flux, giving suck too long, &c.

——The sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind.

——Injuries done to the lungs, calculi, &c. I lately saw the symptoms of a phthisis occasioned by a small bone sticking in the *bronchiæ*. It was afterwards vomited along with a considerable quantity of purulent matter, and the patient, by a proper regimen, and the use of the Peruvian bark, recovered.

——Making a sudden transition from a hot to a very cold climate, change of apparel, or whatever greatly lessens the perspiration.

——Frequent and excessive debaucheries. Late watching, and drinking strong liquors, which generally go together, can hardly fail to destroy the lungs. Hence the *bon companion* generally falls a sacrifice to this disease.

——Infection. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided. It cannot be of great benefit to the sick, and must hurt those in health.

——Occupations in life. Those artificers who sit much, and are constantly leaning forward, or pressing upon the stomach and breast, as cutlers, tailors, shoemakers, seamstresses, &c. often die of consumptions. They likewise prove fatal to singers, and all who have occasion to make frequent and violent exertions of the lungs.

——Cold. More consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes, or catching cold after the body has been heated, than from all other causes.

Sharp, saline, and aromatic aliments, which heat and inflame the blood, are likewise frequently the cause of consumptions.

We shall only add, that this disease is often owing to an hereditary taint, or a scrophulous habit; in which case it is generally incurable.

Symptoms.—This disease generally begins with a dry cough, which often continues for some months. If a disposition to vomit after eating be excited by it, there is still greater reason to fear an approaching consumption. The patient complains of a more than usual degree of heat, a pain and oppression of the breast, especially after motion: his spittle is of a saltish taste, and sometimes mixed with blood. He is apt to be sad: his appetite is bad, and his thirst great. There is generally a quick, soft, small pulse; though sometimes the pulse is pretty full, and rather hard. These are the common symptoms of a beginning consumption.

Afterwards the patient begins to spit a greenish white, or bloody matter. His body is extenuated by the hectic fever and colliquative sweats which mutually succeed one another, viz. the one towards night, and the other in the morning. A looseness, and an excessive discharge of urine, are often troublesome symptoms at this time, and greatly weaken the patient. There is a burning heat in the palms of the hands, and the face generally flushes after eating: the fingers become remarkably small, the nails are bent inwards, and the hairs fall off.

At last the swelling of the feet and legs, the total loss of strength, the sinking of the eyes, the difficulty of swallowing, and the coldness of the extremities, shew the immediate approach of death, which, however, the patient seldom believes to be so near. Such is the usual progress of this fatal disease, which, if not early checked, commonly sets all medicine at defiance.

Regimen.—On the first appearance of a consumption, if the patient lives in a large town, or any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the country, where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear.

The best method of taking exercise is to ride on horseback, as this gives the body a great deal of motion without

much fatigue. Such as cannot bear this kind of exercise, must make use of a carriage. A long journey, as it amuses the mind by a continual change of objects, is greatly preferable to riding the same ground over and over. Care, however, must be taken to avoid catching cold from wet clothes, damp beds, or the like. The patient ought always to finish his ride in the morning, or at least before dinner; otherwise it will oftener do harm than good.

It is a pity those who attend the sick seldom recommend riding in this disease, till the patient is either unable to bear it, or the malady has become incurable. Patients are likewise apt to trifle with every thing that is in their own power. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it; while they greedily hunt after relief from medicine, merely because they do not understand it.

Those who have strength and courage to undertake a pretty long voyage, may expect great advantage from it. This to my knowledge has frequently cured a consumption after the patient was, to all appearance, far advanced in that disease, and where medicine had proved ineffectual. Hence it is reasonable to conclude, that if a voyage was undertaken in due time, it would seldom fail to perform a cure.*

Such as try this method of cure, ought to carry as much fresh provisions along with them as will serve for the whole time they are at sea. As milk is not easily obtained in this situation, they ought to live upon fruits, and the broth of chickens, or other young animals which can be kept alive on board. It is scarcely necessary to add, that such voyages should be undertaken, if possible, in the mildest season, and that they ought to be towards a warmer climate.†

Those who have not courage for a long voyage may travel into a more southern climate, as the south of France, Spain, or Portugal; and if they find the air of these coun-

* Two things chiefly operate to prevent the benefits which would arise from sailing. The one is, that physicians seldom order it till the disease is too far advanced: and the other is, that they seldom order a voyage of a sufficient length. A patient may receive no benefit by crossing the channel, who, should he cross the Atlantic, might be completely cured. Indeed we have reason to believe, that a voyage of this kind, if taken in due time, would seldom fail to cure a consumption.

† Though I do not remember to have seen one instance of a genuine consumption of the lungs cured by medicine, yet I have known a West-India voyage work wonders in that dreadful disorder.

tries agree with them, they should continue there at least till their health be confirmed.

Next to proper air and exercise, we would recommend a due attention to diet. The patient should eat nothing that is either heating or hard of digestion, and his drink must be of a soft and cooling nature. All the diet ought to be calculated to lessen the acrimony of the humours, and to nourish and support the patient. For this purpose he must keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole *materia medica*.

Asses' milk is commonly reckoned preferable to any other; but it cannot always be obtained; besides, it is generally taken in a very small quantity; whereas, to produce any effects, it ought to make a considerable part of the patient's diet. It is hardly to be expected, that a gill or two of asses' milk, drank in the space of twenty-four hours, should be able to produce any considerable change in the humours of an adult; and when people do not perceive its effects soon, they lose hope, and so leave it off. Hence it happens, that this medicine, however valuable, very seldom performs a cure. The reason is obvious; it is commonly used too late, is taken in too small quantities, and is not duly persisted in.

I have known very extraordinary effects from asses' milk in obstinate coughs, which threatened a consumption of the lungs, and do verily believe, if used at this period, that it would seldom fail; but if it be delayed till an ulcer is formed, which is generally the case, how can it be expected to succeed?

Asses' milk ought to be drank, if possible, in its natural warmth, and, by a grown person, in the quantity of half an English pint at a time. Instead of taking this quantity night and morning only, the patient ought to take it four times, or at least thrice a-day, and to eat a little light bread along with it, so as to make it a kind of meal.

If the milk should happen to purge, it may be mixed with old conserve of roses. When that cannot be obtained, the powder of crab's claws may be used in its stead. Asses' milk is usually ordered to be drank warm in bed; but as it generally throws the patient into a sweat when taken in this way, it would perhaps be better to give it after he rises.

Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. I knew a man who was reduced to such a degree of weakness in a consumption, as not to be able to turn himself in bed. His wife was at that time giving suck, and the child happening to die, he sucked her breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself, however, greatly benefited by it, he continued to suck her till he became perfectly well, and is at present a strong and healthy man.

Some prefer butter milk to any other, and it is indeed a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first; and is therefore often laid aside without a sufficient trial. It should at first be taken sparingly, and the quantity gradually increased until it comes to be almost the sole food. I never knew it succeed, unless where the patient almost lived upon it.

Cows' milk is most readily obtained of any, and though it be not so easily digested as that of asses or mares, it may be rendered lighter, by adding to it an equal quantity of barley-water, or allowing it to stand for some hours, and afterwards taking off the cream. If it should, notwithstanding, prove heavy on the stomach, a small quantity of brandy or rum, with a little sugar, may be added, which will render it both more light and nourishing.

It is not to be wondered, that milk should for some time disagree with a stomach that has not been accustomed to digest any thing but flesh and strong liquors, which is the case with many of those who fall into consumptions. We do not, however, advise those who have been accustomed to animal food and strong liquors, to leave them off all at once. This might be dangerous. It will be necessary for such to eat a little once a-day of the flesh of some young animal, or rather to use the broth made of chickens, veal, lamb, or such like. They ought likewise to drink a little wine made into negus, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

These must be used only as preparatives to a diet con-

sisting chiefly of milk and vegetables, which the sooner the patient can be brought to bear, the better. Rice and milk, or barley and milk, boiled with a little sugar, is very proper food. Ripe fruits, roasted, baked, or boiled, are likewise proper, as goose or currant berry tarts, apples roasted, or boiled in milk, &c. The jellies, conserves, and preserves, &c. of ripe subacid fruits, ought to be eaten plentifully, as the jelly of currants, conserve of roses, preserved plums, cherries, &c.

Wholesome air, proper exercise, and a diet consisting chiefly of these and other vegetables, with milk, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in this course, he will seldom be disappointed of a cure.

In a populous town in England,* where consumptions are very common, I have frequently seen consumptive patients, who had been sent to the country with orders to ride and live upon milk and vegetables, return in a few months quite plump, and free from any complaint. This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected; where it failed, I never knew medicine succeed.

If the patient's strength and spirits flag, he must be supported by strong broths, jellies, and such like. Some recommend shell fish in this disorder, and with some reason, as they are nourishing and restorative.† All the food and drink ought, however, to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs, and too much accelerate the circulation of the blood.

The patient's mind ought to be kept as easy and cheerful as possible. Consumptions are often occasioned, and always aggravated, by a melancholy cast of mind; for which reason music, cheerful company, and every thing that inspires mirth, are highly beneficial. The patient ought seldom to be left alone, as brooding over his calamities is sure to render him worse.

Medicine.—Though the cure of this disease depends chiefly upon regimen and the patient's own endeavours, yet

* Sheffield.

† I have often known persons of a consumptive habit, where the symptoms were not violent, reap great benefit from the use of oysters. They generally ate them raw, and drank the juice along with them.

we shall mention a few things which may be of service, in relieving some of the more violent symptoms.

In the first stage of a consumption, the cough may sometimes be appeased by bleeding; and the expectoration may be promoted by the following medicines: Take fresh squills, gum ammoniac, and powdered cardamum seeds, of each a quarter of an ounce; beat them together in a mortar, and if the mass prove too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a-day; according as the patient's stomach will bear them.

The *lac ammoniacum*, or milk of gum-ammoniac, as it is called, is likewise a proper medicine in this stage of the disease. It may be used as directed in the pleurisy.

A mixture made of equal parts of lemon-juice, fine honey, and syrup of poppies, may likewise be used. Four ounces of each of these may be simmered together in a sauce-pan, over a gentle fire, and a table-spoonful of it taken at any time when the cough is troublesome.

It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These, instead of removing the cause of the disease, tend rather to increase it by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature: as oxymel, syrup of lemon, &c.

Acids seem to have peculiarly good effects in this disease; they both tend to quench the patient's thirst and to cool the blood. The vegetable acids, as apples, oranges, lemons, &c. appear to be the most proper. I have known patients suck the juice of several lemons every day with manifest advantage, and would for this reason recommend acid vegetables to be taken in as great quantity as the stomach will bear them.

For the patient's drink, we would recommend infusions of the bitter plants, as ground ivy, the lesser centaury, camomile flowers, or water trefoil. These infusions may be drank at pleasure. They strengthen the stomach, promote digestion, rectify the blood, and at the same time answer all the

purposes of dilution, and quench thirst much better than things that are luscious or sweet. But if the patient spit blood, he ought to use, for his ordinary drink, infusions or decoctions of the vulnerary roots, plants, &c.

There are many other mucilaginous plants and seeds of a healing and agglutinating nature, from which decoctions or infusions may be prepared with the same intention; as the orches, the quinceseed, coltsfoot, linseed, sarsaparilla, &c. It is not necessary to mention the different ways in which these may be prepared. Simple infusion or boiling is all that is necessary, aud the dose may be at discretion.

The conserve of roses is here peculiarly proper. It may either be put into the decoction above described, or eaten by itself. No benefit is to be expected from trifling doses of this medicine. I never knew it of any service, unless where three or four ounces at least were used daily for a considerable time. In this way I have seen it produce very happy effects, and would recommend it wherever there is a discharge of blood from the lungs.

When the spitting up of gross matter, oppression of the breast, and the hectic symptoms, shew that an imposthume is formed in the lungs, we would recommend the Peruvian bark, that being the only drug which has any chance to counteract the general tendency which the humours then have to putrefaction.

An ounce of the bark in powder may be divided into eighteen or twenty doses, of which one may be taken every three hours through the day, in a little syrup, or a cup of horehound tea.

If the bark should happen to purge, it may be made into an electuary, with the conserve of roses, thus: Take old conserve of roses, a quarter of a pound; Peruvian bark, a quarter of an ounce; syrup of orange or lemon, as much as will make it of the consistence of honey. This quantity will serve the patient four or five days, and may be repeated as there is occasion.

Such as cannot take the bark in substance, may infuse it in cold water. This seems to be the best menstruum for extracting the virtues of that drug. Half an ounce of bark in powder may be infused for twenty-four hours in half an English pint of water. Afterwards, let it be passed through

a fine strainer, and an ordinary tea-cupful of it taken three or four times a-day.

We would not recommend the bark while there are any symptoms of an inflammation of the breast; but when it is certainly known that matter is collecting there, it is one of the best medicines which can be used. Few patients, indeed, have resolution enough to give the bark a fair trial at this period of the disease, otherwise we have reason to believe that some benefit might be reaped from it.

When it is evident that there is an imposthume in the breast, and the matter can neither be spit up nor carried off by absorption, the patient must endeavour to make it break inwardly, by drawing in the steams of warm water or vinegar with his breath, coughing, laughing, or bawling aloud, &c. When it happens to burst within the lungs, the matter may be discharged by the mouth. Sometimes, indeed, the bursting of the vomica occasions immediate death, by suffocating the patient. When the quantity of matter is great, and the patient's strength exhausted, this is commonly the case. At any rate the patient is ready to fall into a swoon, and should have volatile salts or spirits held to his nose.

If the matter discharged be thick, and the cough and breathing become easier, there may be some hopes of a cure. The diet at this time ought to be light, but restorative, as chicken-broths, sago-gruel, rice, milk, &c., the drink, buttermilk or whey, sweetened with honey. This is likewise a proper time for using the Peruvian bark, which may be taken as directed above.

If the vomica or imposthume should discharge itself into the cavity of the breast, between the pleura and the lungs, there is no way of getting the matter out, but by an incision, as has already been observed. As this operation must always be performed by a surgeon, it is not necessary here to describe it. We shall only add, that it is not so dreadful as people are apt to imagine, and that it is the only chance the patient in this case has for his life.

A NERVOUS CONSUMPTION, is a wasting or decay of the whole body, without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, weakness, want of appetite, &c.

Those who are of a fretful temper, who indulge in spirituous liquors, or who breathe an unwholesome air, are most liable to this disease.

We would chiefly recommend for the cure of a nervous consumption, a light and nourishing diet, plenty of exercise in a free open air, and the use of such bitters as brace and strengthen the stomach; as the Peruvian bark, gentian-root, camomile, horehound, &c. These may be infused in water or wine, and a glass of it drank frequently.

It will greatly assist the digestion, and promote the cure of this disease, to take twice a-day, twenty or thirty drops of the elixir of vitrol in a glass of wine or water. The chalybeate wine is likewise an excellent medicine in this case. It strengthens the solids, and powerfully assists Nature in the preparation of good blood.

Agreeable amusements, cheerful company, and riding-about, are however preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health.

What is called a *symptomatic consumption*, cannot be cured without first removing the disease by which it is occasioned. Thus when a consumption proceeds from the scrophula, or king's-evil, from the scurvy, the asthma, the venereal disease, &c. a due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly.

When *excessive evacuations* of any kind occasion a consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and delicate mothers often fall into consumptions, by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

Before we quit this subject, we would earnestly recommend it to all, as they wish to avoid consumptions, to take as much exercise without doors as they can, to avoid unwholesome air, and to study sobriety. Consumptions owe their present increase not a little to the fashion of sitting up late, eating hot suppers, and spending every evening over a bowl of punch or other strong liquors. These li-

quors, when too freely used, not only hurt the digestion, and spoil the appetite, but heat and inflame the blood, and set the whole constitution on fire.

It has already been observed, that in Dr Arbuthnot's time consumptions made one-tenth part of the bills of mortality in London and its neighbourhood; and it is probable the proportion is now considerably increased. The education of children is every day becoming more effeminate, which paves the way to this disorder; the seeds of disease are sown in the cradle, and the fountain of life is poisoned in its source. Consumptions, when deeply seated, seldom admit of a cure; yet here, as in other diseases, the empyric produces his infallible powders or potions. In every newspaper, and innumerable hand-bills, the quack announces the complete cures he has performed, and the ignorant and credulous part of the world, ever ready to be imposed on, believe in the efficacy of the nostrum, and die in the constant hope of a speedy recovery.

The best advice we can give is to guard against catching cold, the fruitful source of this and many other disorders. This will be more fully explained when treating of colds and coughs, the bane of this island, and the cause of numberless diseases.

CHAP. XIX.

OF THE SLOW OR NERVOUS FEVER.

Nervous fevers have increased greatly of late years in this island, owing doubtless to our different manner of living, and the increase of sedentary employments; as they commonly attack persons of a weak relaxed habit, who neglect exercise, eat little solid food, study hard, or indulge in spirituous liquors.

Causes.—Nervous fevers may be occasioned by whatever depresses the spirits, or impoverishes the blood; as grief, fear, anxiety, want of sleep, intense thought, living on poor watery diet, as unripe fruits, cucumbers, melons, mushrooms, &c. They may likewise be occasioned by damp, confined, or unwholesome air. Hence they are very common in rainy seasons, and prove most fatal to those

who live in dirty low houses, crowded streets, hospitals, jails, or such like places.

Persons whose constitutions have been broken by excessive venery, frequent salivations, too free an use of purgative medicines, or any other excessive evacuations, are most liable to this disease.

Keeping on wet clothes, lying on the damp ground, excessive fatigue, and whatever obstructs the perspiration or causes a spasmodic stricture of the solids, may likewise occasion nervous fevers. We shall only add, frequent and great irregularities in diet. Too great abstinence, as well as excess, is hurtful. Nothing tends so much to preserve the body in a sound state, as a regular diet; nor can any thing contribute more to occasion fevers of the worst kind than its opposite.

Symptoms.—Low spirits, want of appetite, weakness, weariness after motion, watchfulness, deep sighing and dejection of mind, are generally the forerunners of this disease. These are succeeded by a quick low pulse, a dry tongue without any considerable thirst, chilliness and flushing in turns, &c.

After some time the patient complains of a giddiness and pain of the head, has a nausea, with retchings and vomiting; the pulse is quick, and sometimes intermitting; the urine pale, resembling dead small-beer, and the breathing is difficult, with oppression of the breast, and slight alienations of mind.

If, towards the ninth, tenth, or twelfth day, the tongue becomes more moist, with a plentiful spitting, a gentle purging, or a moisture upon the skin; or if a suppuration happen in one or both ears, or large pustules break out about the lips and nose, there is reason to hope for a favourable crisis.

But, if there be an excessive looseness or wasting sweats, with frequent fainting fits; if the tongue when put out trembles excessively, and the extremities feel cold, with a fluttering or slow creeping pulse; if there be a starting of the tendons, an almost total loss of sight and hearing, and an involuntary discharge by stool and urine, there is great reason to fear that death is approaching.

Regimen.—It is very necessary in this disease to keep the patient cool and quiet. The least motion would fatigue

him, and will be apt to occasion weariness, and even faintings. His mind ought not only to be kept easy, but soothed and comforted with the hopes of a speedy recovery. Nothing is more hurtful in low fevers of this kind, than presenting to the patient's imagination gloomy or frightful ideas. These of themselves often occasion nervous fevers, and it is not to be doubted but they will likewise aggravate them.

The patient must not be kept too low. His strength and spirits ought to be supported by nourishing diet and generous cordials. For this purpose his gruel, panado, or whatever food he takes, must be mixed with wine according as the symptoms may require. Pretty strong wine-whey, or small negus sharpened with the juice of orange or lemon, will be proper for his ordinary drink. Mustard-whey is likewise a very proper drink in this fever, and may be rendered an excellent cordial medicine by the addition of a proper quantity of white-wine.

Wine in this disease, if it could be obtained genuine, is almost the only medicine that would be necessary. Good wine possesses all the virtues of the cordial medicines, while it is free from any of their bad qualities. I say good wine; for however common this article of luxury is now become, it is rarely to be obtained genuine, especially by the poor, who are obliged to purchase it in small quantities.

I have often seen patients in low nervous fevers, where the pulse could hardly be felt, with a constant delirium, coldness of the extremities, and almost every other mortal symptom, recover by using, in whey, gruel, and negus, a bottle or two of strong wine every day. Good old sound claret is the best, and may be made into negus, or given by itself, as circumstances require.

In a word, the great aim in this disease is to support the patient's strength, by giving him frequently small quantities of the above, or other drinks of a warm and cordial nature. He is not, however, to be overheated either with liquor or clothes; and his food ought to be light, and given in small quantities.

Medicine.—Where a nausea, load, and sickness at the stomach, prevail at the beginning of the fever, it will be necessary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacuanha in fine powder, or a few spoonfuls of the vomiting julep, will generally answer this purpose very

well. This may be repeated any time before the third or fourth day, if the above symptoms continue. Vomits not only clean the stomach, but by the general shock which they give, promote the perspiration, and have many other excellent effects in slow fevers, where there are no signs of inflammation, and nature wants rousing.

Such as dare not venture upon a vomit, may clean the bowels by a small dose of Turkey rhubarb, or an infusion of senna and manna.

In all fevers the great point is to regulate the symptoms, so as to prevent them from going to either extreme. Thus, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood dense, and the fibres too rigid, bleeding and other evacuations are necessary. But in nervous fevers, where nature flags, where the blood is vapid and poor, and the solids relaxed, the lancet must be spared, and wine, with other cordials, plentifully administered.

It is the more necessary to caution people against bleeding in this disease, as there is generally at the beginning an universal stricture upon the vessels, and sometimes an oppression and difficulty of breathing, which suggest the idea of a plethora, or too great a quantity of blood. I have known even some of the faculty deceived by their own feelings in this respect, so far as to insist upon being bled, when it was evident from the consequences that the operation was improper.

Though bleeding is generally improper in this disease, yet blistering is highly necessary. Blistering-plasters may be applied at all times of the fever with great advantage. If the patient is delirious, he ought to be blistered on the neck or head; and it will be the safest course, when the insensibility continues, as soon as the discharge occasioned by one blistering-plaster abates, to apply another to some other part of the body, and by that means to keep up a continual succession of them till he be out of danger.

I have been more sensible of the advantage of blistering in this than in any other disease. Blistering plasters not only stimulate the solids to action, but likewise occasion a continual discharge, which may in some measure supply the want of critical evacuations, which seldom happen in this kind of a fever. They are most proper, however, either

towards the beginning, or after some degree of stupor has come on, in which last case it will always be proper to blister the head.

If the patient be costive through the course of the disease, it will be necessary to procure a stool, by giving him every other day a clyster of milk and water, with a little sugar, to which may be added a spoonful of common salt, if the above does not operate.

Should a violent looseness come on, it may be checked by small quantities of Venice treacle, or giving the patient for his ordinary drink the white decoction.

A miliary eruption sometimes breaks out about the ninth or tenth day. As eruptions are often critical, great care should be taken not to retard Nature's operation in this particular. The eruption ought neither to be checked by bleeding nor other evacuations, nor pushed out by a hot regimen; but the patient should be supported by gentle cordials, as wine-whey, small negus, sago gruel with a little wine in it, and such like. He ought not to be kept too warm, yet a kindly breathing sweat should by no means be checked.

Though blistering and the use of cordial liquors are the chief things to be depended on in this kind of fever; yet for those who may choose to use them, we shall mention one or two of the forms of medicine which are commonly prescribed in it.*

In desperate cases, where the hiccup and starting of the tendons have already come on, we have sometimes seen extraordinary effects from large doses of musk frequently repeated. Musk is doubtless an antispasmodic, and may be given to the quantity of a scruple three or four times a-day, or oftener if necessary. Sometimes it may be proper to add to the musk a few grains of camphire, and salt of hartshorn, as these tend to promote perspiration and the discharge of urine. Thus, fifteen grains of musk, with three

* When the patient is low, ten grains of Virginian snake-root, and the same quantity of contrayerva root, with five grains of Russian castor, all in fine powder, may be made into a bolus with a little of the cordial confection or syrup of saffron. One of these may be taken every four or five hours.

The following powder may be used with the same intention: Take wild Valerian root in powder, one scruple, saffron and castor each four grains. Mix these by rubbing them together in a mortar, and give one in a cup of wine-whey, three or four times a-day.

grains of camphire, and six grains of salt of hartshorn, may be made into a bolus with a little syrup, and given as above.

If the fever should happen to intermit, which it frequently does towards the decline, or if the patient's strength should be wasted with colliquative sweats, &c. it will be necessary to give him the Peruvian bark. Half a dram, or a whole dram, if the stomach will bear it, of the bark in fine powder, may be given four or five times a-day in a glass of red port or claret. Should the bark in substance not sit easy on the stomach, an ounce of it in powder may be infused in a bottle of Lisbon or Rhenish wine for two or three days, afterwards it may be strained, and a glass of it taken frequently.*

Some give the bark in this and other fevers, where there are no symptoms of inflammation, without any regard to the remission or intermission of the fever. How far future observations may tend to establish this practice, we will not pretend to say; but we have reason to believe, that the bark is a very universal febrifuge, and that it may be administered with advantage in most fevers, where bleeding is not necessary, or where there are no symptoms of topical inflammation.

The nervous fever requires particular care and attention. The patient will certainly sink under the disease, unless the actions of the system are kept up, and his strength supported by stimulating medicines and strengthening diet.

In all stages, and even in the last extremity of the disorder, the hope of the patient should be unabated. The alterations for the better, as well as for the worse, are often sudden and unforeseen, and the last gasp alone should induce us to give over the patient. A bottle, or even two, of generous wine given in the course of twenty-four hours, to a person apparently beyond every hope, has produced the most favourable change, and the patient recovered.

* The bark may likewise be very properly administered along with other cordials, in the following manner: Take an ounce of Peruvian bark, orange-peel half an ounce, Virginian snake-root two drams, saffron one dram. Let all of them be powdered, and infused in an English pint of the best brandy for three or four days. Afterwards the liquor may be strained, and two tea-spoonfuls of it given three or four times a-day in a glass of small wine or negus. I now generally administer Huxham's Tincture.

CHAP. XX.

OF THE MALIGNANT, PUTRID, OR SPOTTED FEVER

This may be called the *pestilential fever* of Europe as in many of its symptoms it bears a great resemblance to that dreadful disease the plague. Persons of a lax habit, a melancholy disposition, and those whose vigour has been wasted by long fasting, watching, hard labour, excessive venery, frequent salivations, &c. are most liable to it.

Causes.—This fever is occasioned by foul air, from a number of people being confined in a narrow place, not properly ventilated; from putrid animal and vegetable effluvia, &c. Hence it prevails in camps, jails, hospitals, and infirmaries, especially where such places are too much crowded, and cleanliness is neglected.

A close constitution of the air, with long rainy or foggy weather, likewise occasions putrid fevers. They often succeed great inundations in low and marshy countries, especially when these are preceded or followed by a hot and sultry season.

Living too much upon animal food, without a proper mixture of vegetables, or eating fish or flesh that has been kept too long, are likewise apt to occasion this kind of fever. Hence sailors on long voyages, and the inhabitants of besieged cities, are very often visited with putrid fevers.

Corn that has been greatly damaged by rainy seasons, or long keeping, and water which has become putrid by stagnation, &c. may likewise occasion this fever.

Dead carcases tainting the air, especially in hot seasons, are very apt to occasion putrid diseases. Hence this kind of fever often prevails in countries which are the scenes of war and bloodshed. This shews the propriety of removing burying-grounds, slaughter-houses, &c. to a proper distance from great towns.

Want of cleanliness is a very general cause of putrid fevers. Hence they prevail amongst the poor inhabitants of large towns, who breathe a confined unwholesome air, and neglect cleanliness. Such mechanics as carry on dirty em-

ployments, and are constantly confined within doors, are likewise very liable to this disease.

We shall only add, that putrid, malignant, or spotted fevers, are highly infectious, and are therefore often communicated by contagion. For which reason, all persons ought to keep at a distance from those affected with such diseases, unless their attendance is absolutely necessary.

Symptoms.—The malignant fever is generally preceded by a remarkable weakness or loss of strength, without any apparent cause. This is sometimes so great, that the patient can scarce walk, or even sit upright, without being in danger of fainting away. His mind too is greatly dejected; he sighs, and is full of dreadful apprehensions.

There is a nausea, and sometimes a vomiting of bile; a violent pain of the head, with a strong pulsation or throbbing of the temporal arteries; the eyes often appear red and inflamed, with a pain at the bottom of the orbit; there is a noise in the ears, the breathing is laborious, and often interrupted with a sigh; the patient complains of a pain about the region of the stomach, and in his back and loins: his tongue is at first white, but afterwards it appears black and chapped; and his teeth are covered with a black crust. He sometimes passes worms both upwards and downwards, is affected with tremors or shaking, and often becomes delirious.

If blood be let, it appears dissolved, or with a very small degree of cohesion, and soon becomes putrid; the stools smell extremely fœtid, and are sometimes of a greenish, black, or reddish cast. Spots of a pale, purple, dun, or black colour, often appear upon the skin, and sometimes there are violent hæmorrhages or discharges of blood from the mouth, eyes, nose, &c.

Putrid fevers may be distinguished from the inflammatory, by the smallness of the pulse, the great dejection of mind, the dissolved state of the blood, the petechiæ or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever, by the heat and thirst being greater, the urine of a higher colour, and the loss of strength, dejection of mind, and all the other symptoms more violent.

It sometimes happens, however, that the inflammatory, nervous, and putrid symptoms, are so blended together as

to render it very difficult to determine to which class the fever belongs. In this case, the greatest caution and skill are requisite. Attention must be paid to those symptoms which are most prevalent, and both the regimen and medicines adapted to them.

Inflammatory and nervous fevers may be converted into malignant and putrid, by too hot a regimen, or improper medicines.

The duration of putrid fevers is extremely uncertain; sometimes they terminate between the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. Their duration depends greatly upon the constitution of the patient, and the manner of treating the disease.

The most favourable symptoms are, a gentle looseness after the fourth or fifth day, with a warm mild sweat. These, when continued for a considerable time, often carry off the fever, and should never be imprudently stopped. Small miliary pustules appearing between the petechiæ or purple spots are likewise favourable, as also hot scabby eruptions about the mouth and nose. It is a good sign when the pulse rises upon the use of wine, or other cordials, and the nervous symptoms abate; deafness coming on towards the decline of the fever, is likewise often a favourable symptom,* as are abscesses in the groin or parotid glands.

Among the unfavourable symptoms may be reckoned an excessive looseness, with a hard swelled belly; large black or livid blotches breaking out upon the skin; aphthæ in the mouth; cold clammy sweats; blindness; change of the voice; a wild staring of the eyes; difficulty of swallowing; inability to put out the tongue; and a constant inclination to uncover the breast. When the sweat and saliva are tinged with blood, and the urine is black, or deposits a black sooty sediment, the patient is in great danger. Starting of the tendons, and fœtid, ichorous, involuntary stools, attended with coldness of the extremities, are generally the forerunners of death.

Regimen.—In the treatment of this disease, we ought to endeavour as far as possible to counteract the putrid tendency of the humours; to support the patient's strength and spirits; and to assist Nature in expelling the cause of

* Deafness is not always a favourable symptom in this disease. Perhaps it is only so, when occasioned by abscesses formed within the ears.

the disease, by gently promoting perspiration and the other evacuations.

It has been observed, that putrid fevers are often occasioned by unwholesome air, and of course they must be aggravated by it. Care should therefore be taken to prevent the air from stagnating in the patient's chamber, to keep it cool, and renew it frequently, by opening the doors or windows of some adjacent apartment. The breath and perspiration of persons in perfect health soon render the air of a small apartment noxious; but this will sooner happen from the perspiration and breath of a person whose whole mass of humours are in a putrid state.

Besides the frequent admission of fresh air, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most readily obtained. These ought frequently to be sprinkled on the floor, the bed, and every part of the room. They may also be evaporated with a hot iron, or by boiling, &c. The fresh skins of lemons or oranges ought likewise to be laid in different parts of the room, and they should be frequently held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would likewise tend to prevent the infection from spreading among those who attend him. Strong scented herbs, as rue, tansy, rosemary, wormwood, &c. may likewise be laid in different parts of the house, and smelled to by those who go near the patient.

The patient must not only be kept cool, but likewise quiet and easy. The least noise will affect his head, and the smallest fatigue will be apt to make him faint.

Few things are of greater importance in this disease than acids, which ought to be mixed with all the patient's food as well as drink. Orange, lemon, or vinegar-whey, are all very proper, and may be drank by turns according to the patient's inclination. They may be rendered cordial by the addition of wine in such quantity as the patient's strength seems to require. When he is very low, he may drink negus, with only one half water, and sharpened with the juice of bitter orange or lemon. In some cases a glass of wine may now and then be allowed. The most proper wine is Rhenish; but if the body be open, red port or claret is to be preferred.

When the body is bound, a tea-spoonful of the cream of tartar may be put into a cup of the patient's drink, as there is occasion: or he may drink a decoction of tamarinds, which will both quench his thirst, and promote a discharge by stool.

If camomile-tea will sit upon his stomach, it is a very proper drink in this disease. It may be sharpened by adding to every cup of tea, ten or fifteen drops of the elixir of vitriol.

The food must be light, as panado, or groat gruel, to which a little wine may be added, if the patient be weak and low; and they ought all to be sharpened with the juice of orange, the jelly of currants, or the like. The patient ought likewise to eat freely of ripe fruits, as roasted apples, currant or gooseberry tarts, preserved cherries, or plums, &c.

Taking a little food or drink frequently, not only supports the spirits, but counteracts the putrid tendency of the humours; for which reason the patient ought frequently to be sipping small quantities of some of the acid liquors mentioned above, or any that may be more agreeable to his palate, or more readily obtained.

If he be delirious, his feet and hands ought to be frequently fomented with a strong infusion of camomile flowers. This, or an infusion of the bark, to such as can afford it, cannot fail to have a good effect. Fomentations of this kind not only relieve the head, by relaxing the vessels in the extremities, but as their contents are absorbed, and taken into the system, they may assist in preventing the putrescency of the humours.

Medicine.—If a vomit be given at the beginning of this fever, it will hardly fail to have a good effect; but if the fever has gone on for some days, and the symptoms are violent, vomits are not quite so safe. The body, however, is always to be kept gently open, by clysters, or mild laxative medicines.

Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful.

Blistering-plasters are never to be used unless in the greatest extremities. If the petechiæ or spots should sud-

denly disappear, the patient's pulse sink remarkably, and a delirium with other bad symptoms come on, blistering may be permitted. In this case the blistering plasters are to be applied to the head, and inside of the legs or thighs. But as they are sometimes apt to occasion a gangrene, we would rather recommend warm cataplasms, or poultices of mustard and vinegar, to be applied to the feet, having recourse to blisters only in the utmost extremities.

It is common in the beginning of this fever to give the emetic tartar in small doses, repeated every second or third hour, till it shall either vomit, purge, or throw the patient in a sweat. This practice is very proper, provided it be not pushed so far as to weaken the patient.

A very ridiculous notion has long prevailed, of expelling the poisonous matter of malignant diseases by trifling doses of cordial or alexipharmic medicines. In consequence of this notion, the contrayerva-root, the cordial confection, the mithridate, &c. have been extolled as infallible remedies. There is reason however to believe, that these seldom do much good. Where cordials are necessary, we know none that is superior to good wine; and therefore again recommend it both as the safest and best. Wine with acids and antiseptics, are the only things to be relied on in the cure of malignant fevers.

In the most dangerous species of this disease, when it is attended with purple, livid, or black spots, the Peruvian bark must be administered. I have seen it, when joined with acids, prove very successful, even in cases where the petechiæ had the most threatening aspect. But to answer this purpose, it must not only be given in large doses, but duly persisted in.

The best method of administering the bark is certainly in substance. An ounce of it in powder may be mixed with half an English pint of water, and the same quantity of red wine, and sharpened with the elixir or spirit of vitriol, which will both make it sit easier on the stomach, and render it more beneficial. Two or three ounces of the syrup of lemon may be added; and two table spoonfuls of the mixture taken every two hours, or oftener, if the stomach is able to bear it.

Those who cannot take the bark in substance, may infuse it in wine, as recommended in the preceding disease.

If there be a violent looseness, the bark must be boiled in red wine with a little cinnamon, and sharpened with the elixir of vitriol as above. Nothing can be more beneficial in this kind of looseness than plenty of acids, and such things as promote a gentle perspiration.

If the patient be troubled with vomiting, a dram of the salt of wormwood, dissolved in an ounce and a half of fresh lemon juice, and made into a draught, with an ounce of simple cinnamon-water, and a bit of sugar, may be given and repeated as often as it is necessary.

If swellings of the glands appear, their suppuration is to be promoted by the application of poultices, ripening cataplasms, &c.; and as soon as there is any appearance of matter in them, they ought to be laid open, and the poultices continued.

I have known large ulcerous sores break out in various parts of the body in the decline of this fever, of a livid gangrenous appearance, and a most putrid cadaverous smell. These gradually healed, and the patient recovered, by a plentiful use of Peruvian bark and wine, sharpened with vitriolic acid.

For preventing putrid fevers, we would recommend a strict regard to cleanliness; a dry situation; sufficient exercise in the open air: wholesome food, and a moderate use of generous liquors. Infection ought, above all things, to be avoided. No constitution is proof against it. I have known persons seized with a putrid fever, by only making a single visit to a patient in it; others have caught it by lodging for one night in a town where it prevailed; and some by attending the funerals of such as died of it.*

When a putrid fever seizes any person in a family, the greatest attention is necessary to prevent the disease from spreading. The sick ought to be placed in a large apartment, as remote from the rest of the family as possible; he ought likewise to be kept extremely clean, and should have

* The late Sir John Pringle expressed a concern lest these cautions should prevent people from attending their friends or relations when afflicted with putrid fevers. I told him I meant only to discourage unnecessary attendance, and mentioned a number of instances where putrid fevers had proved fatal to persons, who were rather hurtful than beneficial to the sick. This sagacious physician agreed with me, in thinking that a good doctor and a careful nurse were the only necessary attendants; and that all others not only endangered themselves, but generally, by their solicitude and ill-directed care, hurt the sick.

fresh air frequently let into his chamber; whatever comes from him should be immediately removed, his linen should be frequently changed, and those in health ought to avoid all unnecessary communication with him.

Any one who is apprehensive of having caught the infection, ought immediately to take a vomit, and to work it off by drinking plentifully of camomile tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

The person ought likewise to take an infusion of the bark and camomile flowers for his ordinary drink; and before he goes to bed, he may drink an English pint of pretty strong negus, or a few glasses of generous wine. I have been frequently obliged to follow this course when malignant fevers prevailed, and have likewise recommended it to others with constant success.

People generally fly to bleeding and purging as antidotes against infection; but these are so far from securing them, that they often, by debilitating the body, increase the danger.

Those who wait upon the sick in putrid fevers, ought always to have a piece of sponge or a handkerchief dipt in vinegar, or juice of lemon, to smell to, while near the patient. They ought likewise to wash their hands, and if possible, to change their clothes, before they go into company.

CHAP. XXI.

OF THE MILIARY FEVER.

This fever takes its name from the small pustules or bladders which appear on the skin, resembling, in shape and size, the seeds of millet. The pustules are either red or white, and sometimes both are mixed together.

The whole body is sometimes covered with pustules; but they are generally more numerous where the sweat is most abundant, as on the breast, the back, &c. A gentle sweat, or moisture on the skin, greatly promotes the eruption; but when the skin is dry, the eruption is both more painful and dangerous.

Sometimes this is a primary disease; but it is much oftener only a symptom of some other malady, as the small-

pox, measles, ardent, putrid, or nervous fever, &c. In all these cases it is generally the effect of too hot a regimen or medicine.

The miliary fever chiefly attacks the idle and the phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigour and prime of life. It is likewise more incident to women than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak watery diet. Such females are extremely liable to be seized with this disease in childbed, and often lose their lives by it.

Causes.—The miliary fever is sometimes occasioned by violent passions or affections of the mind; as excessive grief, anxiety, thoughtfulness, &c. It may likewise be occasioned by excessive watching, great evacuations, a weak watery diet, rainy seasons, eating too freely of cold, crude, unripe fruits, as plums, cherries, cucumbers, melons, &c. Impure waters, or provisions which have been spoiled by rainy seasons, long keeping, &c. may likewise cause miliary fevers. They may also be occasioned by the stoppage of any customary evacuation, as issues, setons, ulcers, the bleeding piles in men, or the menstrual flux in women, &c.

This disease in childbed-women is sometimes the effect of great costiveness during pregnancy; it may likewise be occasioned by their excessive use of green trash, and other unwholesome things, in which pregnant women are too apt to indulge. But its most general cause is indolence. Such women as lead a sedentary life, especially during pregnancy, and at the same time live grossly, can hardly escape this disease in childbed. Hence it proves extremely fatal to women of fashion, and likewise to those women in manufacturing towns, who, in order to assist their husbands, sit close within doors for almost the whole of their time. But among women who are active and laborious, who live in the country, and take sufficient exercise without doors, this disease is very little known.

Symptoms.—When this is a primary disease, it makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, faintishness, sighing, a low quick pulse, difficulty of breathing, with great anxiety and oppression of the breast. The patient is

restless, and sometimes delirious; the tongue appears white and the hands shake, with often a burning heat in the palms; and in childbed-women the milk generally goes away, and the other discharges stop.

The patient feels an itching or pricking pain under the skin, after which innumerable small pustules of a red or white colour begin to appear. Upon this the symptoms generally abate, the pulse becomes more full and soft, the skin grows moister, and the sweat, as the disease advances, begins to have a peculiar fœtid smell; the great load on the breast, and oppression of the spirits, generally go off, and the customary evacuations gradually return. About the sixth or seventh day from the eruption, the pustules begin to dry and fall off, which occasions a very disagreeable itching in the skin.

It is impossible to ascertain the exact time when the pustules will either appear or go off. They generally come out on the third or fourth day, when the eruption is critical; but when symptomatical, they may appear at any time of the disease.

Sometimes the pustules appear and vanish by turns. When that is the case, there is always danger; but when they go in all of a sudden, and do not appear again, the danger is very great.

In childbed-women the pustules are commonly at first filled with clear water, afterwards they grow yellowish. Sometimes they are interspersed with pustules of a red colour. When these only appear, the disease goes by the name of a *rash*.

Regimen.—In all eruptive fevers, of whatever kind, the chief point is to prevent the sudden disappearing of the pustules, and to promote their maturation. For this purpose, the patient must be kept in such a temperature, as neither to push out the eruption too fast, nor to cause it to retreat prematurely. The diet and drink ought therefore to be in a moderate degree nourishing and cordial; but neither strong nor heating. The patient's chamber ought neither to be kept too hot nor cold; and he should not be too much covered with clothes. Above all, the mind is to be kept easy and cheerful. Nothing so certainly makes an eruption go in as fear, or the apprehension of danger.

The food must be weak chicken-broth, with bread, pa-

nado, sago, or groat-gruel, &c. to a gill of which may be added a spoonful or two of wine, as the patient's strength requires, with a few grains of salt and a little sugar. Good apples, roasted or boiled, with other ripe fruits of an opening cooling nature, may be eaten.

The drink may be suited to the state of the patient's strength and spirits. If these be pretty good, the drink ought to be weak; as water-gruel, balm-tea, or the decoction mentioned below.*

When the patient's spirits are low, and the eruption does not rise sufficiently, his drink must be a little more generous; as wine-whey, or small negus, sharpened with the juice of orange or lemon, and made stronger or weaker as circumstances may require.

Sometimes the miliary fever approaches towards a putrid nature, in which case the patient's strength must be supported with generous cordials, joined with acids; and if the degree of putrescence be great, the Peruvian bark must be administered. If the head be much affected, the body must be kept open by emollient clysters.†

MEDICINE.—If the food and drink be properly regulated, there will be little occasion for medicine in this disease. Should the eruption however not rise, or the spirits flag, it will not only be necessary to support the patient with cor-

* Take two ounces of the shavings of hartshorn, and the same quantity of sarsaparilla, boil them in two English quarts of water. To the strained decoction add a little white sugar, and let the patient take it for his ordinary drink.

† In the *Commercium Literarium* for the year 1735, we have the history of an epidemical miliary fever which raged at Strasburgh in the months of November, December, and January; from which we learn the necessity of a temperate regimen in this malady, and likewise that physicians are not always the first who discover the proper treatment of diseases. 'This fever made terrible havock even among men of robust constitutions, and all medicine proved in vain. They were seized in an instant with shivering, yawning, stretching, and pains in the back, succeeded by a most intense heat; at the same time there was a great loss of strength and appetite. On the seventh or ninth day the miliary eruptions appeared, or spots like flea-bites, with great anxiety, a delirium, restlessness and tossing in bed. Bleeding was fatal. While matters were in this unhappy situation, a midwife, of her own accord, gave to a patient in the height of the disease a clyster of rain water and butter without salt, and for his ordinary drink a quart of spring water, half a pint of generous wine, the juice of a lemon, and six ounces of the whitest sugar gently boiled till a scum arose, and this with great success; for the belly was soon loosened, the grievous symptoms vanished, and the patient was restored to his senses, and snatched from the jaws of death.' This practice was imitated by others with the like happy effects.

dials, but likewise to apply blistering-plasters. The most proper cordial in this case is good wine, which may either be taken in the patient's food or drink: and if there be signs of putrescence, the bark and acids may be mixed with wine, as directed in the putrid fever.

Some recommend blistering through the whole course of this disease; and when nature flags, and the eruption comes and goes, it may be necessary to keep up a stimulus, by a continual succession of small blistering-plasters; but we would not recommend above one at a time. If, however, the pulse should sink remarkably, the pustules strike in, and the head be affected, it will be necessary to apply several blistering-plasters to the most sensible parts, as the inside of the legs, thighs, &c.

Bleeding is seldom necessary in this disease, and sometimes it does much hurt, as it weakens the patient and depresses his spirits. It is therefore never to be attempted unless by the advice of a physician. We mention this because it has been customary to treat this disease in childbed women, by plentiful bleeding, and other evacuations, as if it were highly inflammatory. But this practice is generally very unsafe. Patients in this situation bear evacuations very ill. And indeed, the disease seems often to be more of a putrid than of an inflammatory nature.

Though this fever is often occasioned in childbed-women by too hot a regimen, yet it would be dangerous to leave that off all of a sudden, and have recourse to a very cool regimen, and large evacuations. We have reason to believe, that supporting the patient's spirits, and promoting the natural evacuations, is here much safer than to have recourse to artificial ones, as these, by sinking the spirits, seldom fail to increase the danger.

If the disease proves tedious, or the recovery slow, we would recommend the Peruvian bark, which may either be taken in substance, or infused in wine or water, as the patient inclines.

The miliary fever, like other eruptive diseases, requires gentle purging, which should not be neglected, as soon as the fever is gone off, and the patient's strength will permit.

To prevent this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much

exercise as they can bear, avoiding all green trashy fruits, and other unwholesome things; and when in childbed, they ought strictly to observe a cool regimen.

In this fever the changes are frequent and sudden, and require the most constant attention, in order to change the regimen and medicines, and adapt them to the new symptoms. It often assumes a quite different character and the death of the patient would often be the consequence of neglect in these circumstances. When this is taken into consideration, it will evince more strongly the remarks made in a former chapter on the extreme folly and danger of using any general fever medicine.

CHAP. XXII.

OF THE REMITTING FEVER.

This fever takes its name from a remission of the symptoms, which happens sometimes sooner and sometimes later, but generally about the eighth day. The remission is generally preceded by a gentle sweat, after which the patient seems greatly relieved, but in a few hours the fever returns. These remissions return at very irregular periods, and are sometimes of longer, sometimes of shorter duration; the nearer, however, that the fever approaches to a regular intermittent, the danger is the less.

Causes.—Remitting fevers prevail in low marshy countries abounding with wood and stagnating water; but they prove most fatal in places where great heat and moisture are combined, as in some parts of Africa, the province of Bengal in the East Indies, &c. where remitting fevers are generally of a putrid kind, and prove very fatal. They are most frequent in close calm weather, especially after rainy seasons, great inundations, or the like. No age, sex, or constitution is exempted from the attack of this fever; but it chiefly seizes persons of a relaxed habit, who live in low dirty habitations, breathe an impure stagnating air, take little exercise, and use unwholesome diet.

Symptoms.—The first symptoms of this fever, are generally yawning, stretching, pain and giddiness in the head, with alternate fits of heat and cold. Sometimes the patient

is affected with a delirium at the very first attack. There is a pain, and sometimes a swelling, about the region of the stomach, the tongue is white, the eyes and skin frequently appear yellow, and the patient is often afflicted with bilious vomitings. The pulse is sometimes a little hard, but seldom full, and the blood, when let, rarely shews any signs of inflammation. Some patients are exceedingly costive, and others are afflicted with a very troublesome looseness.

It is impossible to describe all the symptoms of this disease, as they vary according to the situation, the season of the year, and the constitution of the patient. They may likewise be greatly changed by the method of treatment, and by many other circumstances too tedious to mention. Sometimes the bilious symptoms predominate, sometimes the nervous, and at other times the putrid. Nor is it at all uncommon to find a succession of each of these, or even a complication of them at the same time, in the same person.

Regimen.—The regimen must be adapted to the prevailing symptoms. When there are any signs of inflammation, the diet must be slender, and the drink weak and diluting. But when nervous or putrid symptoms prevail, it will be necessary to support the patient with food and liquors of a more generous nature, such as are recommended in the immediately preceding fevers. We must, however, be very cautious in the use of things of a heating quality, as this fever is frequently changed into a *continual* by an hot regimen, and improper medicines.

Whatever the symptoms are, the patient ought to be kept cool, quiet, and clean. His apartment, if possible, should be large and frequently ventilated, by letting in fresh air at the doors and windows. It ought likewise to be sprinkled with vinegar, juice of lemon, or the like. His linen, bedclothes, &c. should be frequently changed, and all his excrements immediately removed. Though these things have been recommended before, we think it necessary to repeat them here, as they are of more importance to the sick than practitioners are apt to imagine.*

* The ingenious Dr Lind, of Windsor, in his inaugural dissertation concerning the putrid remitting fever of Bengal, has the following observation.—'The patient's shirt, bed-clothes, and bedding, ought frequently to be changed, and exposed to the air, and all his excrements immediately removed; the bed-chamber should be well ventilated, and

Medicine.—In order to cure this fever, we must endeavour to bring it to a regular intermission. This intention may be promoted by bleeding, if there be any signs of inflammation; but when that is not the case, bleeding ought by no means to be attempted, as it will weaken the patient and prolong the disease. A vomit, however, will seldom be improper, and is generally of great service. Twenty or thirty grains of ipecacuanha will answer this purpose very well; but, where it can be obtained, we would rather recommend a grain or two of tartar emetic, with five or six grains of ipecacuanha, to be made into a draught, and given for a vomit. This may be repeated once or twice at proper intervals, if the sickness or nausea continues.

The body ought to be kept open either by clysters or gentle laxatives, as weak infusions of senna and manna, small doses of the lenitive electuary, cream of tartar, tamarinds, stewed prunes, or the like; but all strong or drastic purgatives are to be carefully avoided.

By this course the fever in a few days may generally be brought to a pretty regular or distinct intermission, in which case the Peruvian bark may be administered, and it will seldom fail to perfect the cure. It is needless here to repeat the methods of giving the bark, as we have already had occasion frequently to mention them.

The most likely way to avoid this fever is to use a wholesome or nourishing diet, to pay the most scrupulous attention to cleanliness, to keep the body warm, to take sufficient exercise, and in hot countries to avoid damp situations, night air, evening dews, and the like. In countries where it is endemical, the best preventive medicine which we can recommend is the Peruvian bark, which may either be chewed, or infused in brandy or wine, &c. Some recommend smoking tobacco as very beneficial in marshy countries, both for prevention of this and intermitting fevers.

frequently sprinkled with vinegar; in short, every attention should be paid to the patient. I can affirm, that a physician who puts these in practice will much oftener succeed, than one who is even more skilful, but has not opportunity of using these means.'

CHAP. XXIII.

OF THE SMALL-POX.

This disease, which originally came from Arabia, is now become so general, that very few escape it at one time of life or another. It is a most contagious malady; and has for many years proved the scourge of Europe.

The small-pox generally appear towards the spring. They are very frequent in summer, less so in autumn, and least of all in winter. Children are most liable to this disease; and those whose food is unwholesome, who want proper exercise, and abound with gross humours, run the greatest hazard from it.

The disease is distinguished into the distinct and confluent kind; the latter of which is always attended with danger. There are likewise other distinctions of the small-pox; as the crystalline, the bloody, &c.

Causes.—The small-pox is commonly caught by infection. Since the disease was first brought into Europe, the infection has never been wholly extinguished, nor have any proper methods, as far as I know, been taken for that purpose; so that now it has become in a manner constitutional. Children who have over-heated themselves by running, wrestling, &c. or adults after a debauch, are most apt to be seized with the small-pox.

Symptoms.—This disease is so generally known, that a minute description of it is unnecessary. Children commonly look a little dull, seem listless and drowsy for a few days before the more violent symptoms of the small-pox appear. They are likewise more inclined to drink than usual, have little appetite for solid food, complain of weariness, and, upon taking exercise, are apt to sweat. These symptoms are succeeded by slight fits of cold and heat in turns, which, as the time of the eruption approaches, become more violent, and are accompanied with pains of the head and loins, vomiting, &c. The pulse is quick, with a great heat of the skin, and restlessness. When the patient drops asleep, he wakes in a kind of horror, with a sudden start, which is a very common symptom of the approaching eruption; as are also convulsion-fits in very young children.

About the third or fourth day from the time of sickening,

the small-pox generally begin to appear; sometimes indeed they appear sooner, but that is no favourable symptom. At first they very nearly resemble flea-bites, and are soonest discovered on the face, arms, and breast.

The most favourable symptoms are a slow eruption, and an abatement of the fever as soon as the pustules appear. In a mild, distinct kind of small-pox, the pustules seldom appear before the fourth day from the time of sickening, and they generally keep coming out gradually for several days after. Pustules which are distinct, with a florid red basis, and which fill with thick purulent matter, first of a whitish, and afterwards of a yellowish colour, are the best.

A livid brown colour of the pustules is an unfavourable symptom; as also when they are small and flat, with black specks in the middle. Pustules which contain a thin watery ichor are very bad. A great number of pox on the face is always attended with danger. It is likewise a very bad sign when they run into one another.

It is a most unfavourable symptom when petechiæ, or purple, brown, or black spots are interspersed among the pustules. These are signs of a putrid dissolution of the blood, and shew the danger to be very great. Bloody stools or urine, with a swelled belly, are bad symptoms; as is also a continual strangury. Pale urine and a violent throbbing of the arteries of the neck are signs of an approaching delirium, or of convulsion fits. When the face does not swell, or falls before the pox come to maturity, it is very unfavourable. If the face begins to fall about the eleventh or twelfth day, and at the same time the hands and feet begin to swell, the patient generally does well; but when these do not succeed each other, there is reason to apprehend danger. When the tongue is covered over with a brown crust, it is an unfavourable symptom. Cold shivering fits coming on at the height of the disease, are likewise unfavourable. Grinding of the teeth, when it proceeds from an affection of the nervous system, is a bad sign; but sometimes it is occasioned by worms, or a disordered stomach.

Regimen.—When the first symptoms of the small-pox appear, people are ready to be alarmed, and often fly to the use of medicine, to the great danger of the patient's life. I have known children, to appease the anxiety of their pa-

rents, bled, blistered, and purged, during the fever which preceded the eruption of the small-pox, to such a degree, that Nature was not only disturbed in her operation, but rendered unable to support the pustules after they were out; so that the patient, exhausted by mere evacuations, sunk under the disease.

When convulsions appear, they give a dreadful alarm. Immediately some nostrum is applied, as if this were a primary disease, whereas it is only a symptom, and far from being an unfavourable one, of the approaching eruption. As the fits generally go off before the actual appearance of the small-pox, it is attributed to the medicine, which by this means acquires a reputation without any merit.*

All that is, generally speaking, necessary during the eruptive fever, is to keep the patient cool and easy, allowing him to drink freely of some weak diluting liquors; as balm tea, barley-water, clear whey, gruels, &c. He should not be confined to bed, but should sit up as much as he is able, and should have his feet and legs frequently bathed in lukewarm water. His food ought to be very light; and he should be as little disturbed with company as possible.

Much mischief is done at this period by confining the patient too soon to his bed, and plying him with warm cordials or sudorific medicines. Every thing that heats and inflames the blood, increases the fever, and pushes out the pustules prematurely. This has numberless ill effects. It not only increases the number of pustules, but likewise tends to make them run into one another; and when they have been pushed out with too great violence, they generally fall in before they come to maturity.

The good women, as soon as they see the small-pox begin to appear, commonly ply their tender charge with cordials, saffron, and marigold-tea, wine, punch, and even brandy itself. All these are given with a view, as they term it, to throw out the eruption from the heart. This, like most other popular mistakes, is the abuse of a very just

* Convulsion-fits are no doubt very alarming, but their effects are often salutary. They seem to be one of the means made use of by Nature for breaking the force of a fever. I have always observed a fever abated, and sometimes quite removed, after one or more convulsion-fits. This readily accounts for convulsions being a favourable symptom in the fever which precedes the eruption of the small-pox, as every thing that mitigates this fever lessens the eruption.

observation, *that when there is a moisture on the skin, the pox rise better, and the patient is easier, than when it continues dry and parched.* But that is no reason for forcing the patient into a sweat. Sweating never relieves unless where it comes spontaneously, or is the effect of drinking weak diluting liquors. The patient ought to have no more clothing in bed than is necessary to prevent his catching cold, and should be frequently taken up, to keep him cool, and prevent too great a flux of blood towards the head.

Children are often so peevish, that they will not lie in bed without a nurse constantly by them. Indulging them in this, we have reason to believe, has many bad effects both upon the nurse and the child. Even the natural heat of the nurse cannot fail to augment the fever of the child; but if she too proves feverish, which is often the case, the danger must be increased.*

Laying several children who have the small-pox in the same bed, has many ill consequences. They ought, if possible, never to be in the same chamber, as the perspiration, the heat, smell, &c. all tend to augment the fever, and to heighten the disease. It is common among the poor to see two or three children lying in the same bed, with such a load of pustules that even their skins stick together. One can hardly view a scene of this kind without being sickened by the sight; but how must the effluvia affect the poor patients, many of whom perish by this usage!†

A very dirty custom prevails among the lower class of people, of allowing children in the small-pox to keep on the same linen, during the whole period of that loathsome dis-

* I have known a nurse, who had the small-pox before, so infected by lying constantly in bed with a child in a bad kind of small-pox, that she had not only a great number of pustules which broke out all over her body, but afterwards a malignant fever which terminated in a number of imposthumes or boils, and from which she narrowly escaped with her life. We mention this to put others upon their guard against the danger of this virulent infection.

† This observation is likewise applicable to hospitals, workhouses, &c. where numbers of children happen to have the small-pox at the same time. I have seen above forty children cooped up in one apartment, all the while they had this disease, without any of them being admitted to breathe the fresh air. No one can be at a loss to see the impropriety of such conduct. It ought to be a rule not only in hospitals, for the small-pox, but likewise for other diseases, that no patient should be within sight or hearing of another. This is a matter to which too little regard is paid. In most hospitals and infirmaries, the sick, the dying, and the dead, are often to be seen in the same apartment.

ease. This is done lest they should catch cold; but it has many ill consequences. The linen becomes hard by the moisture which it absorbs, and frets the tender skin. It likewise occasions a bad smell, which is very pernicious both to the patient and those about him; besides, the filth and sordes which adhere to the linen being resorbed, or taken up again into the body, greatly augment the disease.

A patient should not be suffered to be dirty in an internal disease, far less in the small-pox. Cutaneous disorders are often occasioned by nastiness alone, and are always increased by it. Were the patient's linen to be changed every day, it would greatly refresh him. Care indeed is to be taken that the linen be thoroughly dry. It ought likewise to be put on when the patient is most cool.

So strong is the vulgar prejudice in this country, notwithstanding all that has been said against the hot regimen in the small-pox, that numbers still fall a sacrifice to that error. I have seen poor women travelling in the depth of winter, and carrying their children along with them in the small-pox, and have frequently observed others begging by the way-side, with infants in their arms covered with the pustules; yet I could never learn that one of these children died by this sort of treatment. This is certainly a sufficient proof of the safety, at least, of exposing patients in the small-pox to the open air. There can be no reason, however, for exposing them to public view. It is now very common in the environs of great towns to meet patients in the small-pox on the public walks. This practice, however well it may suit the purposes of boasting inoculators, is dangerous to the citizens, and contrary to the laws of humanity and sound policy.

The food in this disease ought to be very light, and of a cooling nature, as panado, or bread boiled with equal quantities of milk and water, good apples roasted or boiled with milk, and sweetened with a little sugar, or such like.

The drink may be equal parts of milk and water, clear sweet whey, barley-water, or thin gruel, &c. After the pox are full, butter-milk, being of an opening and cleansing nature, is a very proper drink.

Medicine.—This disease is generally divided into four different periods, *viz.* the fever which precedes the eruption, the eruption itself, the suppuration or maturation of the pustules, and secondary fever.

It has already been observed, that little more is necessary during the primary fever than to keep the patient cool and quiet, allowing him to drink diluting liquors, and bathing his feet frequently in warm water. Though this be generally the safest course that can be taken with infants, yet adults of a strong constitution and plethoric habit sometimes require bleeding. When a full pulse, a dry skin, and other symptoms of inflammation, render this operation necessary, it ought to be performed; but unless these symptoms are urgent, it is safer to let it alone; if the body is bound, emollient clysters may be thrown in.

If there is a great nausea or inclination to vomit, weak camomile-tea or lukewarm water may be drank, in order to cleanse the stomach. At the beginning of a fever, Nature generally attempts a discharge, either upwards or downwards, which, if promoted by gentle means, would tend greatly to abate the violence of the disease.

Though every method is to be taken during the primary fever, by a cool regimen, &c. to prevent too great an eruption; yet after the pustules have made their appearance, our business is to promote the suppuration by diluting drink, light food, and if Nature seems to flag, by generous cordials. When a low creeping pulse, faintishness, and great loss of strength, render cordials necessary, we would recommend good wine, which may be made into negus, with an equal quantity of water, and sharpened with the juice of an orange, the jelly of currants, or the like. Wine-whey, sharpened as above, is likewise a proper drink in this case; great care however must be taken not to overheat the patient by any of these things. This, instead of promoting, would retard the eruption.

The rising of the small-pox is often prevented by the violence of the fever; in this case the cool regimen is strictly to be observed. The patient's chamber must not only be kept cool, but he ought likewise frequently to be taken out of bed, and to be lightly covered with clothes while in it.

Excessive restlessness often prevents the rising and filling of the small-pox. When this happens, gentle opiates are necessary. These, however, ought always to be administered with a sparing hand. To an infant, a tea-spoonful of the syrup of poppies may be given every five or six hours till it has the desired effect. An adult will require a table-spoonful in order to answer the same purpose.

If the patient be troubled with a strangury, or suppression of urine, which often happens in the small-pox, he should be frequently taken out of bed, and if he be able, should walk across the room with his feet bare. When he cannot do this, he may be frequently set on his knees in bed, and should endeavour to pass his urine as often as he can. When these do not succeed, a tea spoonful of the sweet spirits of nitre may be occasionally mixed with his drink. Nothing more certainly relieves the patient, or is more beneficial in the small-pox, than a plentiful discharge of urine.

If the mouth be foul, and the tongue dry and chapped, it ought frequently to be washed, and the throat gargled with water and honey, sharpened with a little vinegar or currant-jelly.

During the rising of the small-pox, it frequently happens that the patient is eight or ten days without a stool. This not only tends to heat and inflame the blood, but the fæces, by lodging so long in the body, become acrid, and even putrid; from whence bad consequences must ensue. It will therefore be proper, when the body is bound, to throw in an emollient clyster every second or third day, through the whole course of the disease. This will greatly cool and relieve the patient.

When petechiæ, purple, black, or livid spots appear among the small-pox, the Peruvian bark must immediately be administered in as large doses as the patient's stomach can bear. For a child, two drams of the bark in powder may be mixed in three ounces of common water, one ounce of simple cinnamon-water, and two ounces of the syrup of orange or lemon. This may be sharpened with the spirits of vitriol, and a table-spoonful of it given every hour. If it be given to an adult in the same form, he may take at least three or four spoonfuls every hour. This medicine ought not to be trifled with, but must be administered as frequently as the stomach can bear it; in which case it will often produce very happy effects. I have frequently seen the petechiæ disappear, and the small-pox, which had a very threatening aspect, rise and fill with laudable matter, by the use of the bark and acids.

The patient's drink ought likewise in this case to be generous, as wine or strong negus acidulated with spirits of vitriol, vinegar, the juice of lemon, jelly of currants, or such

like. His food must consist of apples, roasted or boiled, preserved cherries, plums, and other fruits of an acid nature.

The bark and acids are not only necessary when the petechiæ or putrid symptoms appear, but likewise in the lymphatic or crystalline small-pox, where the matter is thin, and not duly prepared. The Peruvian bark seems to possess a singular power of assisting Nature in preparing laudable pus, or what is called good matter; consequently it must be beneficial both in this and other diseases, where the crisis depends on a suppuration. I have often observed where the small-pox were flat, and the matter contained in them quite clear and transparent, and where at first they had the appearance of running into one another, that the Peruvian bark, acidulated as above, changed the colour and consistence of the matter, and produced the most happy effects.

When the eruption subsides suddenly, or, as the good women term it, when the small-pox *strike in*, before they have arrived at maturity, the danger is very great. In this case blistering-plasters must be immediately applied to the wrists and ancles, and the patient's spirits supported with cordials.

Sometimes bleeding has a surprising effect in raising the pustules after they have subsided; but it requires skill to know when this is proper, or to what length the patient can bear it. Sharp cataplasms, however, may be applied to the feet and hands, as they tend to promote the swelling of these parts, and by that means to draw the humours towards the extremities.

The most dangerous period of this disease is what we call the secondary fever. This generally comes on when the small-pox begin to blacken, or turn on the face; and most of those who die of the small-pox are carried off by this fever.

Nature generally attempts, at the turn of the small-pox, to relieve the patient by loose stools. Her endeavours this way are by no means to be counteracted, but promoted, and the patient at the same time supported by food and drink of a nourishing and cordial nature.

If, at the approach of the secondary fever, the pulse be very quick, hard, and strong, the heat intense, and the breathing laborious, with other symptoms of an inflammation of the breast, the patient must immediately be bled.

The quantity of blood to be let must be regulated by the patient's strength, age, and the urgency of the symptoms.

But in the secondary fever, if the patient be faintish, the pustules become suddenly pale, and if there be great coldness of the extremities, blistering-plasters must be applied, and the patient must be supported with generous cordials. Wine, and even spirits, have sometimes been given in such cases with amazing success.

As the secondary fever is in a great measure, if not wholly, owing to the absorption of the matter, it would seem highly consonant to reason, that the pustules, as soon as they come to maturity, should be opened. This is every day practised in other phlegmons which tend to suppuration; and there seems to be no cause why it should be less proper here. On the contrary, we have reason to believe that by this means the secondary fever might always be lessened, and often wholly prevented.

The pustules should be opened when they begin to turn of a yellow colour. Very little art is necessary for this operation. They may either be opened with a lancet or a needle, and the matter absorbed by a little dry lint. As the pustules are generally first ripe on the face, it will be proper to begin with opening these, and the others in course as they become ripe. The pustules generally fill again, a second, or even a third time; for which cause the operation must be repeated, or rather continued as long as there is any considerable appearance of matter in the pustules.

We have reason to believe that this operation, rational as it is, has been neglected from a piece of mistaken tenderness in parents. They believe that it must give great pain to the poor child; and, therefore, would rather see it die than have it thus tortured. This notion, however, is entirely without foundation. I have frequently opened the pustules when the patient did not see me, without his being in the least sensible of it; but suppose it were attended with a little pain, that is nothing in comparison to the advantages which may arise from it.

Opening the pustules not only prevents the resorption of the matter into the blood, but likewise takes off the tension of the skin, and by that means greatly relieves the patient. It likewise tends to prevent the pitting, which is a matter of no small importance. Acrid matter, by lodging long in

the pustules, cannot fail to corrode the tender skin; by which many a handsome face becomes so deformed as hardly to bear a resemblance to the human figure.*

It is generally necessary, after the small-pox are gone off, to purge the patient. If, however, the body has been open through the whole course of the disease, or if butter-milk and other things of an opening nature have been drank freely after the height of the small-pox, purging becomes less necessary; but it never ought wholly to be neglected.

For very young children, an infusion of senna and prunes, with a little rhubarb, may be sweetened with coarse sugar, and given in small quantities till it operates. Those who are farther advanced must take medicines of a sharper nature. For example, a child of five or six years of age may take eight or ten grains of fine rhubarb in powder overnight, and the same quantity of jalap in powder next morning. This may be wrought off with fresh broth or water gruel, and may be repeated three or four times, five or six days intervening between each dose. For children further advanced, and adults, the dose must be increased in proportion to the age and constitution.†

When imposthumes happen after the small-pox, which is not seldom the case, they must be brought to suppuration as soon as possible, by means of ripening poultices; and when they have been opened, or have broke of their own accord, the patient must be purged. The Peruvian bark and a milk diet will likewise be useful in this case.

When a cough, a difficulty of breathing, or other symptoms of a consumption, succeed to the small-pox, the patient must be sent to a place where the air is good, and put upon a course of asses' milk, with such exercise as he can bear. For further directions in this case, see the article *Consumptions*.

* Though this operation can never do harm, yet it is only necessary when the patient has a great load of small-pox, or when the matter which they contain is of so thin and acrid a nature, that there is reason to apprehend bad consequences from its being too quickly resorbed, or taken up again into the mass of circulating humours.

† I have of late been accustomed, after the small-pox, to give one, two, three, four, or five grains of calomel, according to the age of the patient, over night, and to work it off next morning, with a suitable dose of jalap. Or the jalap and calomel may be mixed together, and given in the morning.

OF INOCULATION.

Though no disease, after it is formed, baffles the power of medicine more effectually than the small-pox, yet more may be done before-hand to render this disease favourable than any one we know, as almost all the danger from it may be prevented by inoculation. This salutary invention has been known in Europe above half a century; but, like most other useful discoveries, it has, till of late, made but slow progress. It must, however, be acknowledged, to the honour of this country, that inoculation has met with a more favourable reception here, than among any of our neighbours. It is still, however, far from being general, which we have reason to fear will be the case, as long as the practice continues in the hands of the faculty.

No discovery can be of general utility, while the practice of it is kept in the hands of a few. Had the inoculation of the small-pox been introduced as a fashion, and not as a medical discovery, or had it been practised by the same kind of operators here, as it is in those countries from whence we learned it, it had long ago been universal. Fears, jealousies, prejudices, and opposite interests, are, and ever will be, the most effectual obstacles to the progress of any salutary discovery. Hence it is that the practice of inoculation, never became in any measure general, even in England, till taken up by men not bred to physic. These have not only rendered the practice more extensive, but likewise more safe, and by acting under less restraint than the regular practitioners, have taught them that the patient's greatest danger arose, not from the want of care, but from the excess of it.

They know very little of the matter, who impute the success of modern inoculators to any superior skill, either in preparing the patient or communicating the disease. Some of them, indeed, from a sordid desire of engrossing the whole practice to themselves, pretend to have extraordinary secrets or nostrums for preparing persons for inoculation, which never fail of success. But this is only a pretence calculated to blind the ignorant and inattentive. Common sense and prudence alone are sufficient, both in the choice of the subject and management of the operation.

Whoever is possessed of these may perform this office for his children whenever he finds it convenient, provided they be in a good state of health.

This sentiment is not the result of theory, but of observation. Though few physicians have had more opportunities of trying inoculation in all its different forms, so little appears to me to depend on these, generally reckoned important circumstances, of preparing the body, communicating the infection by this or the other method, &c. that for several years past I have persuaded the parents or nurses to perform the whole themselves, and have found that method followed with equal success, while it is free from many inconveniences that attend the other.*

The small-pox may be communicated in a great variety of ways with nearly the same degree of safety and success. In Turkey, from whence we learned the practice, the women communicate the disease to children, by opening a bit of the skin with a needle, and putting into the wound a little matter taken from a ripe pustule. On the coast of Barbary, they pass a thread wet with the matter through the skin between the thumb and fore-finger; and in some of the states of Barbary, inoculation is performed by rubbing in the variolous matter between the thumb and fore-finger, or on other parts of the body. The practice of communicating the small-pox, by rubbing the variolous matter upon the skin, has been long known in many parts of Asia and Europe as well as in Barbary, and has generally gone by the name of *buying the small-pox*. The same custom is said to have obtained in Wales long ago.

* A critical situation, too often to be met with, first put me upon trying this method. A gentleman who had lost all his children except one son by the natural small-pox, was determined to have him inoculated. He told me his intention, and desired I would persuade the mother and grandmother, &c. of its propriety. But that was impossible. They were not to be persuaded, and either could not get the better of their fears, or were determined against conviction. It was always a point with me not to perform the operation without the consent of the parties concerned. I therefore advised the father, after giving his son a dose or two of rhubarb, to go to a patient who had the small-pox of a good kind, to open two or three of the pustules, taking up the matter with a little cotton, and as soon as he came home, to take his son apart, and give his arm a slight scratch with a pin, afterwards to rub the place well with the cotton, and take no farther notice of it. All this he punctually performed; and at the usual period the small-pox made their appearance, which were of an exceeding good kind, and so mild as not to confine the boy an hour to his bed. None of the other relations knew but the disease had come in the natural way, till the boy was well.

The present method of inoculating in Britain is to make two or three slanting incisions in the arm, so superficial as not to pierce quite through the skin, with a lancet wet with fresh matter taken from a ripe pustule; afterwards the wounds are closed up, and left without any dressing. Some make use of a lancet covered with the dry matter; but this is less certain, and ought never to be used unless where fresh matter cannot be obtained; when this is the case, the matter ought to be moistened by holding the lancet for some time in the steam of warm water.*

Indeed, if fresh matter be applied long enough to the skin, there is no occasion for any wound at all. Let a bit of thread about half an inch long, wet with the matter, be immediately applied to the arm, midway between the shoulder and the elbow, and covered with a piece of the common sticking plaster, and kept on for eight or ten days. This will seldom fail to communicate the disease. We mention this method, because many people are afraid of a wound: and doubtless the more easily the operation can be performed, it has the greater chance to become general. Some people imagine that the discharge from a wound lessens the eruption; but there is no great stress to be laid upon this notion; besides, deep wounds often ulcerate and became troublesome.

We do not find that inoculation is at all considered as a medical operation in those countries from whence we learned it. In Turkey it is performed by the women, and in the East Indies by the Brahmins or priests. In this country the custom is still in its infancy; we make no doubt, however, but it will soon become so familiar, that parents will think no more of inoculating their children, than at present they do of giving them a purge.

No set of men have it so much in their power to render the practice of inoculation general as the clergy, the greatest opposition to it still arising from some scruples of conscience, which they alone can remove. I would recommend it to them, not only to endeavour to remove the religious objections which weak minds may have to this salutary

* Mr Tronchin communicates this disease by a little bit of thread dipt in the matter, which he covers with a small blistering-plaster. This method may no doubt be used with advantage in those cases where the patient is very much alarmed at the sight of any cutting instrument.

practice, but to enjoin it as a duty, and to point out the danger of neglecting to make use of a mean which Providence has put in our power, for saving the lives of our offspring. Surely such parents as wilfully neglect the means of saving their children's lives, are as guilty as those who put them to death. I wish this matter were duly weighed. No one is more ready to make allowance for human weakness and religious prejudices; yet I cannot help recommending it in the warmest manner to parents, to consider how great an injury they do their children, by neglecting to give them this disease in the early period of life.

The numerous advantages arising from the inoculation of the small-pox have been pretty fully pointed out by the learned Dr M'Kenzie, in his History of Health.* To those mentioned by the Doctor we shall only add, that such as

* 'Many and great,' says this humane author, 'are the dangers attending the natural infection, from all which the inoculation is quite secure. The natural infection may invade weak or distempered bodies, by no means disposed for its kindly reception. It may attack them at a season of the year either violently hot or intensely cold. It may be communicated from a sort of small-pox impregnated with the utmost virulence. It may lay hold upon people unexpectedly, when a dangerous sort is imprudently imported into a maritime place. It may surprise us soon after excesses committed in luxury, intemperance, or lewdness. It may likewise seize on the innocent after indispensable watchings, hard labour, or necessary journeys. And is it a trivial advantage, that all these unhappy circumstances can be prevented by inoculation? By inoculation numbers are saved from deformity as well as from death. In the natural small-pox, how often are the finest features, and the most beautiful complexions, miserably disfigured? Whereas inoculation rarely leaves any ugly marks or scars, even where the number of pustules on the face has been very considerable, and the symptoms by no means favourable. And many other grievous complaints that are frequently subservient to the natural sort, seldom follow the artificial. Does not inoculation also prevent those inexpressible terrors that perpetually harass persons who never had this disease, insomuch that when the small-pox is epidemical, entire villages are depopulated, markets ruined, and the face of distress spread over the whole country? From this terror it arises, that justice is frequently postponed, or discouraged, at sessions or assizes where the small-pox rages. Witnesses and juries dare not appear; and by reason of the necessary absence of some gentlemen, our honourable and useful judges are not attended with that reverence and splendour due to their office and merit. Does not inoculation, in like manner, prevent our brave sailors from being seized with this distemper on ship-board, where they must quickly spread the infection among such of the crew who never had it before, and where they have scarce any chance to escape, being half stifled with the closeness of their cabins, and but very indifferently nursed? Lastly, with regard to the soldiery, the miseries attending these poor creatures, when attacked by the small-pox on a march, are inconceivable, without attendance, without lodgings, without any accommodation; so that one of three commonly perishes.'

have not had the small-pox in the early period of life, are not only rendered unhappy, but likewise in a great measure unfit for sustaining many of the most useful and important offices. Few people would choose even to hire a servant who had not had the small-pox, far less to purchase a slave, who had the chance of dying of this disease. How could a physician or a surgeon, who had never had the small-pox himself, attend others under that malady? How deplorable is the situation of females, who arrive at mature age without having had the small-pox! A woman with child seldom survives this disease: and if an infant happen to be seized with the small-pox upon the mother's breast, who has not had the disease herself, the scene must be distressing! If she continue to suckle the child, it is at the peril of her own life; and if she wean it, in all probability it will perish. How often is the affectionate mother forced to leave her house and abandon her children, at the very time when her care is most necessary? Yet, should parental affection get the better of her fears, the consequences would often prove fatal. I have known the tender mother and her sucking infant laid in the same grave, both untimely victims to this dreadful malady. But these are scenes too shocking even to mention. Let parents who run away with their children to avoid the small-pox, or who refuse to inoculate them in infancy, consider to what deplorable situations they may be reduced by this mistaken tenderness!

As the small-pox is now become an epidemical disease in most parts of the known world, no other choice remains but to render the malady as mild as possible. This is the only manner of extirpation now left in our power; and though it may seem paradoxical, the artificial method of communicating the disease, could it be rendered universal, would amount to nearly the same thing as rooting it out. It is a matter of small consequence, whether a disease be entirely extirpated, or rendered so mild as neither to destroy health nor hurt the constitution; but that this may be done by inoculation, does not now admit of a doubt. The numbers who die under inoculation hardly deserve to be named. In the natural way, one in four or five generally dies; but by inoculation not one in a thousand. Nay, some can boast of having inoculated ten thousand without the loss of a single patient.

I have often wished to see some plan established for rendering this salutary practice universal; but am afraid I shall never be so happy. The difficulties are many; yet the thing is by no means impracticable. The aim is great, no less than saving the lives of one-fourth part of mankind. What ought not to be attempted in order to accomplish so desirable an end?

The first step towards rendering the practice universal, must be to remove the religious prejudices against it. This, as already observed, can only be done by the clergy. They must not only recommend it as a duty to others, but likewise practise it on their own children. Example will ever have more influence than precept.

The next thing requisite, is to put it in the power of all. For this purpose, we would recommend it to the faculty to inoculate the children of the poor *gratis*. It is hard that so useful a part of mankind should, by their poverty, be excluded from such a benefit.

Should this fail, it is surely in the power of any state to render the practice general, at least as far as their dominion extends. We do not mean that it ought to be enforced by a law. The best way to promote it would be to employ a sufficient number of operators at the public expense, to inoculate the children of the poor. This would only be necessary till the practice became general; afterwards custom, the strongest of all laws, would oblige every individual to inoculate his children, to prevent reflections.

It may be objected to this scheme, that the poor would refuse to employ the inoculators: this difficulty is easily removed. A small premium to enable mothers to attend their children while under the disease, would be a sufficient inducement; besides, the success attending the operation would soon banish all objections to it. Even considerations of profit would induce the poor to embrace this plan. They often bring up their children to the age of ten or twelve, and when they come to be useful they are snatched away by this malady, to the great loss of their parents, and detriment of the public.

The British legislature has of late years shewn great attention to the preservation of infant lives, by supporting the Foundling Hospital, &c. But we will venture to say, if one tenth part of the sums laid out in supporting that institution,

had been bestowed towards promoting the practice of inoculation of the small-pox among the poor, that not only more useful lives had been saved, but the practice, ere now, rendered quite universal in this island. It is not to be imagined what effect example and a little money will have upon the poor; yet, if left to themselves, they would go on for ever in the old way, without thinking of any improvement. We only mean this as a hint to the humane and public-spirited. Should such a scheme be approved, a proper plan might easily be laid down for the execution of it.

But as public plans are very difficult to bring about, and often by the selfish views and misconduct of those entrusted with the execution of them, fail of answering the noble purposes for which they were designed; we shall, therefore, point out some other method by which the benefits of inoculation may be extended to the poor.

There is no doubt but inoculators will daily become more numerous. We would therefore have every parish in Britain to allow one of them a small annual salary for inoculating all the children in the parish at a proper age. This might be done at a very trifling expense, and it would enable every one to enjoy the benefit of this salutary invention.

Two things chiefly operate to prevent the progress of inoculation. The one is a wish to put the evil day as far off as possible. This is a principle in our nature; and as inoculation seems rather to be anticipating a future evil, it is no wonder mankind are so averse to it. But this objection is sufficiently answered by the success. Who in his senses would not prefer a lesser evil to-day to a greater to-morrow, provided they were equally certain?

The other obstacle is the fear of reflections. This has a very great weight with the bulk of mankind. Should the child die, they think the world would blame them. This they cannot bear. Here lies the difficulty; and till that be removed, inoculation will make but small progress. Nothing however can remove it but custom. Make the practice fashionable, and all objections will soon vanish. It is fashion alone that has led the multitude since the beginning of the world, and will lead them to the end. We must, therefore, call upon the more enlightened part of mankind to set a pattern to the rest. Their example, though it may for some time meet with opposition, will at length prevail.

I am aware of an objection to this practice from the expense with which it may be attended: this is easily obviated. We do not mean that every parish ought to employ a Sutton or a Dimsdale as inoculators. These have by their success already recommended themselves to crowned heads, and are beyond the vulgar reach; but have not others an equal chance to succeed? They certainly have. Let them make the same trial, and the difficulties will soon vanish. There is not a parish and hardly a village in Britain, destitute of some person who can bleed. But this is a far more difficult operation, and requires both more skill and dexterity than inoculation.

The persons to whom we would chiefly recommend the performance of this operation, are the clergy. Most of them know something of medicine. Almost all of them bleed, and can order a purge, which are all the qualifications necessary for the practice of inoculation. The priests among the less enlightened Indians perform this office, and why should a Christian teacher think himself above it? Surely the bodies of men, as well as their souls, merit a part of the pastor's care; at least the greatest Teacher who ever appeared among men, seems to have thought so.

Should all other methods fail, we would recommend it to parents to perform the operation themselves. Let them take any method of communicating the disease they please; provided the subjects be healthy, and of a proper age, they will seldom fail to succeed to their wish. I have known many instances even of mothers performing the operation, and never so much as heard of one bad consequence. A planter in one of the West India islands is said to have inoculated with his own hand in one year, three hundred of his slaves, who, notwithstanding the warmth of the climate, and other unfavourable circumstances, all did well. Common mechanics have often, to my knowledge, performed the operation with as good success as physicians. We do not, however, mean to discourage those who have it in their power, from employing people of skill to inoculate their children, and attend them while under the disease; but only to shew, that where such cannot be had, the operation ought not upon that account to be neglected.

Instead of multiplying arguments to recommend this practice, I shall just beg leave to mention the method which

I took with my own son, then an only child. After giving him two gentle purges, I ordered the nurse to take a bit of thread which had been previously wet with fresh matter from a pock, and to lay it upon his arm, covering it with a piece of sticking plaster. This remained on six or seven days, till it was rubbed off by accident. At the usual time the small-pox made their appearance, and were exceedingly favourable. Surely this, which is all that is generally necessary, may be done without any skill in medicine.

We have been the more full on this subject, because the benefits of inoculation cannot be extended to society by any other means than making the practice general. While it is confined to a few, it must prove hurtful to the whole. By means of it the contagion is spread, and is communicated to many who might otherwise never have had the disease. Accordingly it is found that nearly the same number die of the small-pox now as before inoculation was introduced; and this important discovery, by which alone more lives might be saved than by all the endeavours of the Faculty, is in a great measure lost by its benefits not being extended to the whole community.*

The spring and autumn have been usually reckoned the most proper seasons for inoculation, on account of the weather being then most temperate; but it ought to be considered that these are generally the most unhealthy seasons of the whole year. Undoubtedly the best preparation for the disease is a previous good state of health. I have always observed that children in particular are more sickly towards the end of spring and autumn than at any other time of the year. On this account, as well as for the advantage of cool air, I would propose winter as the most proper season for inoculation; though on every other consideration, the spring would seem to be preferable.

The most proper age for inoculation is between three and five. Many approve of inoculating on the breast, and where no circumstances forbid this practice, I have no objection to it. Children, however, are more liable to convulsions at this time than afterwards; besides, the anxiety of

* By a well laid plan for extending inoculation, more lives might be saved at a small expense, than are at present preserved by all the hospitals in England, which cost the public such an amazing sum.

the mother or nurse, should the child be in danger, would not fail to heighten it by spoiling the milk.

Children who have constitutional diseases, must nevertheless be inoculated. It will often mend the habit of body; but ought to be performed at a time when they are most healthy. Accidental diseases should always be removed before inoculation.

It is generally thought necessary to regulate the diet for some time before the disease be communicated. In children, however, great alteration in diet is seldom necessary, their food being commonly of the most simple and wholesome kind, as milk, water-pap, weak broths, bread, light pudding, mild roots, and white meats.

But children who have been accustomed to a richer diet, who are of a gross habit, or abound with bad humours, ought to be put upon a spare diet before they are inoculated. Their food should be of a light cooling nature, and their drink whey, butter-milk, and such like.

We would recommend no other medicinal preparation but two or three mild purges, which ought to be suited to the age and strength of the patient. The success of inoculators does not depend on the preparation of their patients, but on their management of them while under the disease. Their constant care is to keep them cool, and their bodies gently open, by which means the fever is kept low, and the eruption greatly lessened. The danger is seldom great when the pustules are few; and their number is generally in proportion to the fever, which precedes and attends the eruption. Hence the chief secret of inoculation consists in regulating the eruptive fever, which generally may be kept sufficiently low by the methods mentioned above.

The regimen during the disease is in all respects the same as under the natural small-pox. The patient must be kept cool, his diet should be light, and his drink weak and diluting, &c. Should any bad symptoms appear, which is seldom the case, they must be treated in the same way as directed in the natural small-pox. Purging is not less necessary after the small-pox by inoculation than in the natural way, and ought by no means to be neglected.

The new method of *vaccine* inoculation, there is every

reason to believe, will prove an infallible preventive against infection by the natural small-pox. The numerous testimonies already before the public, must convince every impartial inquirer of the high value of this discovery. This subject will be fully treated of in a separate Chapter *On the Cow-Pox*, which will be found in a subsequent part of this work.

CHAP. XXIV.

OF THE MEASLES.

The measles appeared in Europe about the same time with the small-pox, and have a great affinity to that disease. They both come from the same quarter of the world, are both infectious, and seldom attack the same person more than once. The measles are most common in the spring season, and generally disappear in summer. The disease itself, when properly managed, seldom proves fatal; but its consequences are often very troublesome.

Cause.—This disease, like the small-pox, proceeds from infection, and is more or less dangerous according to the constitution of the patient, the season of the year, the climate, &c.

Symptoms.—The measles, like other fevers, are preceded by alternate fits of heat and cold, with sickness, and loss of appetite. The tongue is white, but generally moist. There is a short cough, a heaviness of the head and eyes, drowsiness, and a running at the nose. Sometimes, indeed, the cough does not come before the eruption has appeared. There is an inflammation and heat in the eyes, accompanied with a defluxion of fresh rheum, and great acuteness of sensation, so that they cannot bear the light without pain. The eye-lids frequently swell so as to occasion blindness. The patient generally complains of his throat; and a vomiting or looseness often precedes the eruption. The stools are commonly greenish; they complain of an itching of the skin, and are remarkably peevish. Bleeding at the nose is common, both before and in the progress of the disease.

About the fourth day, small spots, resembling flea-bits, appear, first upon the face, then upon the breast, and af-

terwards on the extremities: these may be distinguished from the small pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed by the eruption, as in the small-pox, are rather increased; but the vomiting generally ceases.

About the sixth or seventh day from the time of sickening, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. The fever, however, and difficulty of breathing, often continue, especially if the patient has been kept upon too hot a regimen. Petechiæ, or purple spots, may likewise be occasioned by this error.

A violent looseness sometimes succeeds the measles; in which case the patient's life is in imminent danger.

Such as die of the measles, generally expire about the ninth day from the invasion, and are commonly carried off by a peripneumony, or inflammation of the lungs.

The most favourable symptoms are a moderate looseness, a moist skin, and a plentiful discharge of urine.

When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger. If the measles turn too soon of a pale colour, it is an unfavourable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles are very unfavourable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs. Our business in this disease is to assist Nature, by proper cordials, in throwing out the eruption, if her efforts be too languid: but when they are too violent, they must be restrained by evacuations and cool diluting liquors, &c. We ought likewise to endeavour to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing.

Regimen.—The cool regimen is necessary here as well as in the small-pox. The food too must be light, and the drink diluting. Acids, however, do not answer so well in the measles as in the small-pox, as they tend to exasperate the cough. Small beer likewise, though a good drink in the small-pox, is here improper. The most suitable liquors are decoctions of liquorice with marsh-mallow roots and sarsaparilla, infusions of linseed, or of the flowers of elder,

balm-tea, clarified whey, barley-water, and such like. These, if the patient be costive, may be sweetened with honey; or, if that should disagree with the stomach, a little manna may occasionally be added to them.

MEDICINE.—The measles being an inflammatory disease, without any critical discharge of matter, as in the small-pox, bleeding is commonly necessary, especially when the fever runs high, with difficulty of breathing, and great oppression of the breast. But if the disease be of a mild nature, bleeding may be omitted.*

Bathing the feet and legs frequently in lukewarm water, both tend to abate the violence of the fever, and to promote the eruption.

The patient is often greatly relieved by vomiting. When there is a tendency this way, it ought to be promoted by drinking lukewarm water, or weak camomile-tea.

When the cough is very troublesome, with dryness of the throat, and difficulty of breathing, the patient may hold his head over the steam of warm water, and draw the steam into his lungs.

He may likewise lick a little spermaceti and sugar-candy pounded together; or take now and then a spoonful of the oil of sweet almonds, with sugar-candy dissolved in it. These will soften the throat, and relieve the tickling cough.

If at the turn of the disease the fever assumes new vigour, and there appears great danger of suffocation, the patient must be bled according to his strength, and blistering-plasters applied, with a view to prevent the load from being thrown on the lungs, where if an inflammation should fix itself, the patient's life will be in imminent danger.

In case the measles should suddenly disappear, it will be necessary to pursue the same method which we have recommended when the small-pox recede. The patient must be supported with wine and cordials. Blistering-plasters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Warm poultices may likewise be applied to the feet and palms of the hands.

When purple or black spots appear, the patient's drink should be sharpened with spirits of vitriol; and if the pu-

* I do not know any disease wherein bleeding is more necessary than in the measles, especially when the fever runs high; in this case I have always found it relieve the patient.

trid symptoms increase, the Peruvian bark must be administered in the same manner as directed in the small-pox.

Opiates are sometimes necessary, but should never be given except in cases of extreme restlessness, a violent looseness, or when the cough is very troublesome. For children the syrup of poppies is sufficient. A tea-spoonful or two may be occasionally given, according to the patient's age or the violence of the symptoms.

After the measles are gone off, the patient ought to be purged. This may be conducted in the same manner as directed in the small-pox.

If a violent looseness succeed the measles, it may be checked by taking for some days a gentle dose of rhubarb in the morning, and an opiate over night; but if these do not remove it, bleeding will seldom fail to have that effect.

Patients recovering after the measles should be careful what they eat or drink. Their food for some time ought to be light, and in small quantities, and their drink diluting, and rather of an opening nature, as butter milk, whey, and such like. They ought also to beware of exposing themselves too soon to the cold air, lest a suffocating catarrh, an asthma, or a consumption of the lungs should ensue.

Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink asses' milk, to remove to a free air, if in a large town, and to ride daily on horseback. He must keep close to a diet consisting of milk and vegetables; and lastly, if these do not succeed, let him remove to a warmer climate.*

* Attempts have been made to communicate the measles, as well as the small-pox, by inoculation, and we make no doubt but in time the practice may succeed. Dr Home of Edinburgh says, he communicated the disease by the blood. Others have tried this method, and have not found it succeed. Some think that the disease would be more certainly communicated by rubbing the skin of a patient who has the measles with cotton, and afterwards applying the cotton to a wound, as in the small-pox; while others recommend a bit of flannel which had been applied to the patient's skin all the time of the disease, to be afterwards laid upon the arm or leg of the person to whom the infection is to be communicated. There is no doubt but this disease, as well as the small-pox, may be communicated various ways; the most probable, however, is either from cotton rubbed upon the skin, as mentioned above, or by introducing a little of the sharp humour which distils from the eyes of the patient into the blood. It is agreed on all hands, that such patients as have been in-

OF THE SCARLET FEVER.

The scarlet fever is so called from the colour of the patient's skin, which appears as if it were tinged with red wine. It happens at any season of the year, but is most common towards the end of summer; at which time it often seizes whole families; children and young persons are most subject to it.

It begins, like other fevers, with coldness and shivering, without any violent sickness. Afterwards the skin is covered with red spots, which are broader, more florid, and less uniform than the measles. They continue two or three days and then disappear; after which the cuticle or scarf-skin falls off.

There is seldom any occasion for medicine in this disease. The patient ought, however, to keep within doors, to abstain from flesh, strong liquors, and cordials, and to drink freely of cool diluting liquors. If the fever runs high, the body must be kept gently open by emollient clysters, or small doses of nitre and rhubarb. A scruple of the former and five grains of the latter, may be taken thrice a-day, or oftener if necessary.

Children and young persons are sometimes seized at the beginning of this disease with a kind of stupor and epileptic fits. In this case the feet and legs should be bathed in warm water, a large blistering-plaster applied to the neck, and a doze of the syrup of poppies given every night till the patient recovers.*

The scarlet fever, however, is not always of so mild a nature. It is sometimes attended with putrid or malignant symptoms, in which case it is always dangerous. In the malignant scarlet fever, the patient is not only affected with coldness and shivering, but with languor, sickness, and great oppression; to these succeed excessive heat, nausea, and vomiting, with a soreness of the throat; the pulse is extremely quick, but small and depressed; the breathing frequent and laborious; the skin hot, but not quite dry; the tongue moist, and covered with a whitish mucus; the

oculated had the disease very mildly; we therefore wish the practice were more general, as the measles have of late become very fatal.

* Sydenham.

tonsils inflamed and ulcerated. When the eruption appears, it brings no relief: on the contrary, the symptoms generally grow worse, and fresh ones come on, as purging, delirium, &c.

When this disease is mistaken for simple inflammation, and treated with repeated bleedings, purging, and cooling medicines, it generally proves fatal. The only medicines that can be depended on in this case, are cordials and antiseptics, as the Peruvian bark, wine snake-root, and the like. The treatment must be in general similar to that of the putrid fever, or of the malignant ulcerous sore throat.*

OF THE BILIOUS FEVER.

When a continual, remitting, or unremitting fever is accompanied with a frequent or copious evacuation of bile, either by a vomit or stool, the fever is denominated bilious. In Britain the bilious fever generally makes its appearance about the end of summer, and ceases towards the approach of winter. It is most frequent and fatal in warm countries, especially where the soil is marshy, and when great rains are succeeded by sultry heats. Persons who work without doors, lie in camps, or who are exposed to the night-air, are most liable to this kind of fever.

If there are symptoms of inflammation at the beginning of this fever, it will be necessary to bleed, and to put the patient upon the cool diluting regimen recommended in the inflammatory fever. The saline draught may likewise be frequently administered, and the patient's body kept open by clysters or mild purgatives. But if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and, if the body be bound, a gentle purge; after which the Peruvian bark will generally complete the cure.

In case of a violent looseness, the patient must be supported with chicken broths, jellies of hartshorn, and the

* In the year 1774, during winter, a very bad species of this fever prevailed in Edinburgh; it raged chiefly among young people. The eruption was generally accompanied with a quinsey, and the inflammatory symptoms were so blended with others of a putrid nature, as to render the treatment of the disease very difficult. Many of the patients, towards the decline of the fever, were afflicted with large swellings of the submaxillary glands, and not a few had a suppuration in one or both ears.

like; and he may use the *white decoction* for his ordinary drink. If a bloody flux should accompany this fever, it must be treated in the manner recommended under the article *Dysentery*.

When there is a burning heat, and the patient does not sweat, that evacuation may be promoted by giving him, three or four times a-day, a table-spoonful of Mindererus's spirit mixed in a cup of his ordinary drink.

If the bilious fever be attended with the nervous, malignant, or putrid symptoms, which is sometimes the case, the patient must be treated in the same manner as directed under these diseases.

After this fever, proper care is necessary to prevent a relapse. For this purpose the patient, especially towards the end of autumn, ought to continue the use of the Peruvian bark for some time after he is well. He should likewise abstain from all trashy fruits, new liquors, and every kind of flatulent aliment.

CHAP. XXV.

OF THE ERYSIPELAS, OR ST ANTHONY'S FIRE.

This disease, which in some parts of Britain is called *the rose*, attacks persons at any period of life, but is most common between the age of thirty and forty. Persons of a sanguine or plethoric habit are most liable to it. It often attacks young people, and pregnant women; and such as have once been afflicted with it are very liable to have it again. Sometimes it is a primary disease, and at other times only a symptom of some other malady. Every part of the body is liable to be attacked by an erysipelas, but it most frequently seizes the legs or face, especially the latter. It is most common in autumn, or when hot weather is succeeded by cold and wet.

Causes.—The erysipelas may be occasioned by violent passions or affections of the mind; as fear, anger, &c. When the body has been heated to a great degree, and is immediately exposed to the cold air, so that the perspi-

ration is suddenly checked, an erysipelas will often ensue.* It may also be occasioned by drinking to excess, by continuing too long in a warm bath, or by any thing that overheats the blood. If any of the natural evacuations be obstructed, or in too small quantity, it may cause an erysipelas. The same effect will follow from the stoppage of artificial evacuations; as issues, setons, or the like.

Symptoms.—The erysipelas attacks with a shivering thirst, loss of strength, pain in the head and back, heat, restlessness, and a quick pulse; to which may be added vomiting, and sometimes a delirium. On the second, third, or fourth day, the part swells, becomes red, and small pustules appear; at which time the fever generally abates.

When the erysipelas seizes the foot, the parts contiguous swell, the skin shines; and if the pain be violent, it will ascend to the leg, and will not bear to be touched.

When it attacks the face, it swells, appears red, and the skin is covered with small pustules filled with clear water. One or both eyes are generally closed with a swelling; and there is a difficulty of breathing. If the mouth and nostrils be very dry, and the patient drowsy, there is reason to suspect an inflammation of the brain.

If the erysipelas affects the breast, it swells and becomes exceedingly hard, with great pain, and is apt to suppurate. There is a violent pain in the arm-pit on the side affected, where an abscess is often formed.

If in a day or two the swelling subsides, the heat and pain abate, the colour of the part turns yellow, and the cuticle breaks and falls off in scales, the danger is over.

The event of this disease depends greatly upon the constitution of the patient. It is seldom dangerous; but when the constitution is bad, the legs will sometimes swell to a prodigious size, and the cure proves extremely difficult. It has often proved fatal to people in the decline of life, who were of a scorbutic habit, or whose humours were vitiated by irregular living or unwholesome diet.

* The country people in many parts of Britain call this disease a *blast*, and imagine it proceeds from foul air, or ill wind, as they term it. The truth is, they often lie down to rest them, when warm and fatigued, upon the damp ground, where they fall asleep, and lie so long as to catch cold, which occasions the erysipelas. The disease may indeed proceed from other causes, but we may venture to say, that nine times out of ten it is occasioned by cold caught after the body has been greatly heated or fatigued.

When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red colour changes into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to a suppuration; in which case fistules, a gangrene, or mortification, often ensue.

Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

REGIMEN.—In the erysipelas the patient must neither be kept too hot nor too cold, as either of these extremes will tend to make it retreat, which is always to be guarded against. When the disease is mild, it will be sufficient to keep the patient within doors, without confining him to his bed, and to promote the perspiration by diluting liquors, &c.

The diet ought to be slender, and of a moderately cooling and moistening quality, as groat-gruel, panado, chicken or barley-broth, with cooling herbs and fruits, &c. avoiding flesh, fish, strong drink, spices, pickles, and all other things that may heat and inflame the blood; the drink may be barley-water, and infusion of elder-flowers, common whey, and such like.

But if the pulse be low, and the spirits sunk, the patient must be supported with negus, and other things of a cordial nature. His food may be sago-gruel, with a little wine, and nourishing broths, taken in small quantities, and often repeated. Great care, however, must be taken not to overheat him.

MEDICINE.—In this disease much mischief is often done by medicine, especially by external applications. People, when they see an inflammation, immediately think that something ought to be applied to it. This indeed is necessary in large phlegmons; but in an erysipelas the safer course is to apply nothing. Almost all ointments, salves, and plasters, being of a greasy nature, tend rather to obstruct and repel, than promote any discharge from the part. At the beginning of this disease, it is neither safe to promote a suppuration, not to repel the matter too quickly. The erysipelas in many respects resembles the gout, and is to be treated with the greatest caution. Fine wool, or very soft flannel, are the safest applications to the part. These not

only defend it from the external air, but likewise promote the perspiration, which has a great tendency to carry off the disease. In Scotland the common people generally apply a mealy cloth to the parts affected, which is far from being improper.

It is common to bleed in the erysipelas; but this likewise requires caution. If, however, the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary.

Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices or sharp sinapisms may be applied to the soles of the feet, for the same purpose.

In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by emollient clysters, or small doses of nitre and rhubarb. Some indeed recommend very large doses of nitre in the erysipelas; but nitre seldom sits easy on the stomach when taken in large doses. It is, however, one of the best medicines when the fever and inflammation run high. Half a dram of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink, three or four times a-day.

When the erysipelas leaves the extremities, and seizes the head, so as to occasion a delirium or stupor, it is absolutely necessary to open the body. If clysters and mild purgatives fail to have this effect, stronger ones must be given. Blistering-plasters must likewise be applied to the neck, or behind the ears, and sharp cataplasms laid to the soles of the feet.

When the inflammation cannot be discussed, and the part has a tendency to ulcerate, it will then be proper to promote suppuration, which may be done by the application of ripening poultices, with saffron, warm fomentations, and such like.

When the black, livid, or blue colour of the part shews a tendency to mortification, the Peruvian bark must be ad-

ministered. It may be taken along with acids, as recommended in the small-pox, or in any other form more agreeable to the patient. It must not, however, be trifled with, as the patient's life is at stake. A dram may be given every two hours, if the symptoms be threatening, and cloths dipped in warm camphorated spirits of wine, or the tincture of myrrh and aloes, may be applied to the part, and frequently renewed. It may likewise be proper in this case to apply poultices of the bark, or to foment the part affected with a strong decoction of it.

In what is commonly called a *scorbutic erysipelas*, which continues for a considerable time, it will only be necessary to give gentle laxatives, and such things as purify the blood and promote the perspiration. Thus, after the inflammation has been checked by opening medicines, the decoction of woods may be drank, after which a course of bitters will be proper.

Such as are liable to frequent attacks of the erysipelas ought carefully to guard against all violent passions; to abstain from strong liquors, and all fat, viscid, and highly nourishing food. They should likewise take sufficient exercise, carefully avoiding the extremes of heat or cold. Their food should consist chiefly of milk, and such fruits, herbs, and roots, as are of a cooling quality: and their drink ought to be small-beer, whey, butter-milk, and such like. They should never suffer themselves to be long costive. If that cannot be prevented by suitable diet, it will be proper to take frequently a gentle dose of rhubarb, cream of tartar, the lenitive electuary, or some other mild purgative.

CHAP. XXVI.

OF THE PHRENITIS, OR INFLAMMATION OF THE BRAIN.

This is sometimes a primary disease, but oftener only a symptom of some other malady, as the inflammatory, eruptive, or spotted fever, &c. It is very common, however, as a primary disease in warm climates, and is most incident to persons about the prime or vigour of life. The pas-

sionate, the studious, and those whose nervous system is irritable in a high degree, are most liable to it.

Causes.—This disease is often occasioned by night watching, especially when joined with hard study; it may likewise proceed from hard drinking, anger, grief, or anxiety. It is often occasioned by the stoppage of usual evacuations; as the bleeding piles in men, the customary discharges of women, &c. Such as imprudently expose themselves to the heat of the sun, especially by sleeping without doors in a hot season, with their heads uncovered, are often suddenly seized with an inflammation of the brain, so as to awake quite delirious. When repellents are imprudently used in an erysipelas, an inflammation of the brain is sometimes the consequence. It may likewise be occasioned by external injuries, as blows or bruises upon the head, &c.

Symptoms.—The symptoms which usually precede a true inflammation of the brain are, pain of the head, redness of the eyes, a violent flushing of the face, disturbed sleep, or a total want of it, great dryness of the skin, costiveness, a retention of urine, a small dropping of blood from the nose, singing of the ears, and extreme sensibility of the nervous system.

When the inflammation is formed, the symptoms in general are similar to those of the inflammatory fever. The pulse indeed is often weak, irregular, and trembling; but sometimes it is hard and contracted. When thebrain itself is inflamed, the pulse is always soft and low; but when the inflammation only affects the integuments of the brain, viz. the dura and pia mater, it is hard. A remarkable quickness of hearing is a common symptom of this disease: but that seldom continues long. Another usual symptom is a great throbbing or pulsation in the arteries of the neck and temples. Though the tongue is often black and dry, yet the patient seldom complains of thirst, and even refuses drink. The mind chiefly runs upon such objects as have before made a deep impression on it; and sometimes, from a sullen silence the patient becomes all of a sudden quite outrageous.

A constant trembling and starting of the tendons is an unfavourable symptom, as are also a suppression of urine; a total want of sleep; a constant spitting; a grinding of the teeth; which last may be considered as a kind of con-

vulsion. When a phrenitis succeeds an inflammation of the lungs, of the intestines, or of the throat, &c. it is owing to a translation of the disease from these parts to the brain, and generally proves fatal. This shews the necessity of proper evacuations, and the danger of repellents in all inflammatory diseases.

The favourable symptoms are, a free perspiration, a copious discharge of blood from the nose, the bleeding piles, a plentiful discharge of urine, which lets fall a copious sediment. Sometimes the disease is carried off by a looseness, and in women by an excessive flow of the menses.

As this disease often proves fatal in a few days, it requires the most speedy applications. When it is prolonged, or improperly treated, it sometimes ends in madness, or a kind of stupidity, which continues for life.

In the cure, two things are chiefly to be attended to, viz. to lessen the quantity of blood in the brain, and to retard the circulation towards the head.

Regimen.—The patient ought to be kept very quiet. Company, noise, and every thing that affects the senses, or disturbs the imagination, increases the disease. Even too much light is hurtful; for which reason the patient's chamber ought to be a little darkened, and he should neither be kept too hot nor cold. It is not, however, necessary to exclude the company of an agreeable friend, as this has a tendency to soothe and quiet the mind. Neither ought the patient to be kept too much in the dark, lest it should occasion a gloomy melancholy, which is too often the consequence of this disease.

The patient must, as far as possible, be soothed and humoured in every thing. Contradiction will ruffle his mind, and increases his malady. Even when he calls for things which are not to be obtained, or which might prove hurtful, he is not to be positively denied them, but rather put off with the promise of having them as soon as they can be procured, or by some other excuse. A little of any thing that the mind is set upon, though not quite proper, will hurt the patient less than a positive refusal. In a word, whatever he was fond of, or used to be delighted with when in health, may here be tried; as pleasing stories, soft music, or whatever has a tendency to soothe the passions, and compose the mind. Boerhaave proposes several mechanical experiments for this

purpose; as the soft noise of water distilling by drops into a bason, and the patient trying to reckon them, &c. Any uniform sound, if low and continued, has a tendency to procure sleep, and consequently may be of service.

The aliment ought to be light, consisting chiefly of farinaceous substances; as panado, and water-gruel, sharpened with jelly of currants or juice of lemons, ripe fruits roasted or boiled, jellies, preserves, &c. The drink small, diluting, and cooling; as whey, barley-waters, or decoctions of barley and tamarinds, which latter not only render the liquor more palatable, but likewise more beneficial, as they are of an opening nature.

Medicine.—In an inflammation of the brain, nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means to be stopped, but rather promoted, by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked, by putting a straw, or any other sharp body, up the nostril.

Bleeding in the temporal arteries greatly relieves the head; but as this operation cannot always be performed, we would recommend in its stead bleeding in the jugular veins. When the patient's pulse and spirits are so low that he cannot bear bleeding with the lancet, leeches may be applied to the temples. These not only draw off the blood more gradually, but, by being applied nearer to the part affected, generally give more immediate relief.

A discharge of blood from the hæmorrhoidal veins is likewise of great service, and ought by all means to be promoted. If the patient has been subject to the bleeding piles, and that discharge has been stopped, every method must be tried to restore it; as the application of leeches to the parts, sitting over the steams of warm water, sharp clysters, or suppositories made of honey, aloes, and rock-salt.

If the inflammation of the brain be occasioned by the stoppage of evacuations either natural or artificial, as the menses, issues, setons, or such like, all means must be used to restore them as soon as possible, or to substitute others in their stead.

The patient's body must be kept open by stimulating clysters or smart purges, and small quantities of nitre ought

frequently to be mixed with his drink. Two or three drams, or more if the case be dangerous, may be used in the space of twenty-four hours.

The head should be shaved, and frequently rubbed with vinegar and rose-water. Cloths dipped in this mixture may likewise be applied to the temples. The feet ought frequently to be bathed in lukewarm weter, and soft poultices of bread and milk may be kept constantly applied to them.

If the disease proves obstinate, and does not yield to these medicines, it will be necessary to apply a blistering-plaster to the whole head.

This species of inflammation requires a treatment similar to that recommended in other inflammatory disorders; more than ordinary care should be used to keep the patient in a state of ease, composure, and tranquillity: an attentive and sensible nurse will here often be of as much service as the most enlightened physician. The least irritation, even light, noise, or any thing that suddenly or strongly impresses the senses, is carried so rapidly to the brain as to increase the inflammation, and disorder even the organs by which it was conveyed.

CHAP. XXVII.

OF THE OPHTHALMIA, OR INFLAMMATION OF THE EYES.

This disease may be occasioned by external injuries; as blows, burns, bruises, and the like. It may likewise proceed from dust, quick-lime, or other substances, getting into the eyes. It is often caused by the stoppage of customary evacuations; as the healing of old sores, drying up of issues, the suppressing of gentle morning sweats, or of the sweating of the feet, &c. Long exposure to the night air, especially in cold northerly winds, or whatever suddenly checks the perspiration, especially after the body has been much heated, is very apt to cause an inflammation of the eyes. Viewing snow or other white bodies for a long time, or looking stedfastly at the sun, a clear fire, or any bright object, will likewise occasion this malady. A sudden transition from darkness to very bright light, will often have the same effect.

Nothing more certainly occasions an inflammation of the eyes than night-watching, especially reading or writing by candle-light. Drinking spirituous liquors, and excess of venery, are likewise very hurtful to the eyes. The acrid fumes of metals, and of several kinds of fuel, are also pernicious. Sometimes an inflammation of the eyes proceeds from a venereal taint, and often from a scrophulous or gouty habit. It may likewise be occasioned by hairs in the eye-lids turning inwards, and hurting the eyes. Sometimes the disease is epidemic, especially after wet seasons; and I have frequently known it prove infectious, particularly to those who lived in the same house with the patient. It may be occasioned by moist air, or living in low damp houses, especially in persons who are not accustomed to such situations. In children it often proceeds from imprudently drying up of scabbed heads, a running behind the ears, or any other discharge of that kind. Inflammations of the eyes often succeed the small-pox or measles, especially in children of a scrophulous habit.

Symptoms.—An inflammation of the eyes is attended with acute pain, heat, redness, and swelling. The patient is not able to bear the light, and sometimes feels a pricking pain, as if his eyes were pierced with a thorn. Sometimes he imagines his eyes are full of motes, or thinks he sees flies dancing before him. The eyes are filled with a scalding rheum, which rushes forth in great quantities, whenever the patient attempts to look up. The pulse is generally quick and hard, with some degree of fever. When the disease is violent, the neighbouring parts swell, and there is a throbbing or pulsation in the temporal arteries, &c.

A slight inflammation of the eyes, especially from an external cause, is easily cured; but when the disease is violent, and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes total blindness.

If the patient be seized with a looseness, it has a good effect; and when the inflammation passes from one eye to another, as it were by infection, it is no unfavourable symptom. But when the disease is accompanied with a violent pain in the head, and continues long, the patient is in danger of losing his sight.

Regimen.—The diet, unless in scrophulous cases, can hardly be too spare, especially at the beginning. The pa-

tient must abstain from every thing of a heating nature. His food should consist chiefly of mild vegetables, weak broths, and gruels. His drink may be barley-water, balm-tea, common whey, and such like.

The patient's chamber must be darkened, or his eyes shaded by a cover, so as to exclude the light, but not to press upon the eyes. He should not look at a candle, the fire, or any luminous object; and ought to avoid all smoke, as the fumes of tobacco, or any thing that may cause coughing, sneezing, or vomiting. He should be kept quiet, avoiding all violent efforts, either of body or mind, and encouraging sleep as much as possible.

Medicine.—This is one of those diseases wherein great hurt is often done by external applications. Almost every person pretends to be possessed of a remedy for the cure of sore eyes. These remedies generally consist of eye-waters and ointments, with other external applications, which do mischief twenty times for once they do good. People ought therefore to be very cautious how they use such things, as even the pressure upon the eyes often increases the malady.

Bleeding, in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck, the same quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times.

Opening and diluting medicines are by no means to be neglected. The patient may take a small dose of Glauber's salts, and cream of tartar, every second or third day, or a decoction of tamarinds with senna. If these be not agreeable, gentle doses of rhubarb and nitre, a little of the lenitive electuary, or any other mild purgative, will answer the same end. The patient at the same time must drink freely of water-gruel, tea, whey, or any other weak diluting liquor.

He ought likewise to take, at bed-time, a large draught of very weak wine-whey, in order to promote perspiration. His feet and legs must frequently be bathed in lukewarm water, and his head shaved twice or thrice a-week, and afterwards washed in cold water. This has often a remarkably good effect.

If the inflammation does not yield to these evacuations, blistering-plasters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time by the mild blistering-ointment. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but for this purpose it is often necessary to continue the discharge for several weeks.

When the disease has been of long standing, I have seen very extraordinary effects from a seton in the neck, or between the shoulders, especially the latter. It should be put upwards and downwards, or in the direction of the spine, and in the middle between the shoulder blades. It may be dressed twice a-day with yellow basilicon. I have known patients, who had been blind for a considerable time, recover sight by means of a seton placed as above. When the seton is put across the neck, it soon wears out, and is both more painful and troublesome than between the shoulders; besides, it leaves a disagreeable mark, and does not discharge so freely.

When the heat and pain of the eyes are very great, a poultice of bread and milk, softened with sweet oil or fresh butter, may be applied to them, at least all night; and they may be bathed with lukewarm milk and water in the morning.

If the patient cannot sleep, which is sometimes the case, he may take twenty or thirty drops of laudanum, or two spoonfuls of syrup of poppies, over night, more or less according to his age, or the violence of the symptoms.

After the inflammation is gone off, if the eyes still remain weak and tender, they may be bathed every night and morning with cold water and a little brandy, six parts of the former to one of the latter. A method should be contrived by which the eye can be quite immersed in the brandy and water, where it should be kept for some time. I have generally found this, or cold water and vinegar, as good a strengthener of the eyes as any of the most celebrated collyriums.

When an inflammation of the eyes proceeds from a scro-

phulous habit, it generally proves very obstinate. In this case the patient's diet must not be too low, and he may be allowed to drink small negus, or now and then a glass of wine. The most proper medicine is the Peruvian bark, which may either be given in substance, or prepared in the following manner:

Take an ounce of the bark in powder, with two drams of Winter's bark, and boil them in an English quart of water to a pint: when it has boiled nearly long enough, add half an ounce of liquorice-root sliced. Let the liquor be strained. Two, three, or four table-spoonfuls, according to the age of the patient, may be taken three or four times a-day. It is impossible to say how long this medicine should be continued, as the cure is sooner performed in some than in others; but in general, it requires a considerable time to produce any lasting effects.

Dr Cheyne says, 'that Æthiop's mineral never fails in obstinate inflammations of the eyes, even scrophulous ones, if given in a sufficient dose, and duly persisted in.' There is no doubt but this and other preparations of mercury may be of singular service in ophthalmias of long continuance, but they ought always to be administered with the greatest caution, or by persons of skill in physic.

It will be proper frequently to look into the eye, to see if any hairs be turned inwards, or pressing upon them.* These ought to be removed by plucking them out with a pair of small pincers.

Those who are liable to frequent returns of this disease, ought constantly to have an issue in one or both arms. Bleeding or purging in the spring and autumn will be very beneficial to such persons. They ought likewise to live with the greatest regularity, avoiding strong liquor, and every thing of a heating quality. Above all, let them avoid the night air and late studies.

* Any foreign body lodged in the eye may be expeditiously removed by passing a small hair pencil between the eye-lid and the ball of the eye. In some places the peasants do this very effectually, by using their tongue in the same manner.

CHAP. XXVI.

OF THE QUINSEY, OR INFLAMMATION OF THE THROAT.

This disease is very common in Britain, and is frequently attended with great danger. It prevails in the winter and spring, and is most fatal to young people of a sanguine temperament.

Causes.—In general it proceeds from the same causes as other inflammatory disorders, viz. an obstructed perspiration, or whatever heats or inflames the blood. An inflammation of the throat is often occasioned by omitting some part of the covering usually worn about the neck, by drinking cold liquor when the body is warm, by riding or walking against a cold northerly wind, or any thing that greatly cools the throat, and parts adjacent. It may likewise proceed from the neglect of bleeding, purging, or any customary evacuation.

Singing, speaking loud and long, or whatever strains the throat, may likewise cause an inflammation of that organ. I have often known the quinsey prove fatal to jovial companions, who after sitting long in a warm room drinking hot liquors, and singing with vehemence, were so imprudent as to go abroad in the cold night-air. Sitting with wet feet, or keeping on wet clothes, are very apt to occasion this malady. It is likewise frequently occasioned by continuing long in a moist place, sitting near an open window, sleeping in a damp bed, sitting in a room that has been newly plastered, &c. I know people who never fail to have a sore throat if they sit even but a short time in a room that has been lately washed.

Acrid or irritating food may likewise inflame the throat, and occasion a quinsey. It may also proceed from bones, pins, or other sharp substances sticking in the throat, or from the caustic fumes of metals or minerals, as arsenic, antimony, &c. taken in by the breath. This disease is sometimes epidemical and infectious.

Symptoms.—The inflammation of the throat is evident from inspection, the parts appearing red and swelled; besides, the patient complains of pain in swallowing. His

pulse is quick and hard, with other symptoms of a fever. If blood be let, it is generally covered with a tough coat, of a whitish colour, and the patient spits a tough phlegm. As the swelling and inflammation increases, the breathing and swallowing become more difficult; the pain affects the ears; the eyes generally appear red; and the face swells. The patient is often obliged to keep himself in an erect posture, being in danger of suffocation; there is a constant nausea, or inclination to vomit; and the drink, instead of passing into the stomach, is often returned by the nose. The patient is sometimes starved at last, merely from an inability to swallow any kind of food.

When the breathing is laborious, with straitness of the breast and anxiety, the danger is great. Though the pain in swallowing be very great, yet while the patient breathes easy, there is not so much danger. An external swelling is no unfavourable symptom; but if it suddenly falls, and the disease affects the breast, the danger is very great. When a quinsey is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, with a swelled tongue, a pale, ghastly countenance, and coldness of the extremities, are fatal symptoms.

Regimen.—The regimen in this disease is in all respects the same as in the pleurisy, or peripneumony. The food must be light and in small quantity, and the drink plentiful, weak, and diluting, mixed with acids.

It is highly necessary that the patient be kept easy and quiet. Violent affections of the mind, or great efforts of the body, may prove fatal. He should not even attempt to speak but in a low voice. Such a degree of warmth as to promote a constant gentle sweat is proper. When the patient is in bed, his head ought to be raised a little higher than usual.

It is peculiarly necessary that the neck be kept warm; for which purpose several folds of soft flannel may be wrapt round it. That alone will often remove a slight complaint of the throat, especially if applied in due time. We cannot here omit observing the propriety of a custom which prevails among the peasants in Scotland. When they feel any uneasiness of the throat, they wrap a stocking about it all night. So effectual is this remedy, that in many places it passes for a charm, and the stocking is applied with particu-

lar ceremonies; the custom, however, is undoubtedly a good one, and should never be neglected. When the throat has been thus wrapped up all night, it must not be exposed to the cold air through the day, but a handkerchief, or a piece of flannel, kept about it till the inflammation be removed.

The jelly of black currants is a medicine very much in esteem for complaints of the throat; and indeed it is of some use. It should be almost constantly kept in the mouth, and swallowed down leisurely. It may likewise be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in its stead.

Gargles for the throat are very beneficial. They may be made of sage-tea, with a little vinegar and honey, or by adding to half an English pint of the pectoral decoction two or three spoonfuls of honey, and the same quantity of currant-jelly. This may be used three or four times a-day; and if the patient be troubled with tough viscid phlegm, the gargle may be rendered more sharp and cleansing, by adding to it a tea-spoonful of the spirit of *sal ammoniac.* Some recommend gargles made of a decoction of the leaves or bark of the black currant-bush; but where the jelly can be had these are unnecessary.

There is no disease wherein the benefit of bathing the feet and legs in lukewarm water is more apparent; that practice ought therefore never to be neglected. If people were careful to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to a great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, more powerful medicines are necessary.

Medicine.—An inflammation of the throat being a most acute and dangerous distemper, which sometimes takes off the patient very suddenly, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require.

The body should likewise be kept gently open. This may either be done, by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of

rhubarb and nitre, as recommended in the erysipelas. These may be increased according to the age of the patient, and repeated till they have the desired effect.

I have often known very good effects from a bit of *sal prunel* or putrified nitre, held in the mouth, and swallowed down as it melted. This promotes the discharge of *saliva*, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine, &c.

The throat ought likewise to be rubbed twice or thrice a-day with a little of the volatile liniment. This seldom fails to produce some good effects. At the same time the neck ought to be carefully covered with wool or flannel, to prevent the cold from penetrating the skin, as this application renders it very tender. Many other external applications are recommended in this disease, as a swallow's nest, poultices made of the fungus called Jew's ears, album Græcum, &c. But as we do not look upon any of these to be preferable to a common poultice of bread and milk, we shall take no farther notice of them.

Some recommend the gum-guaiacum as a specific in this disease. Half a dram of the gum in powder may be made into an electuary with the rob of elder-berries, or the jelly of currants, for a dose, and repeated occasionally.*

Blistering upon the neck, or behind the ears, in violent inflammations of the throat, is very beneficial; and in bad cases, it will be necessary to lay a blistering-plaster quite across the throat, so as to reach from ear to ear. After the plasters are taken off, the parts ought to be kept discharging by the application of issue ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse.

When the patient has been treated as above, a suppuration seldom happens. This, however, is sometimes the case, in spite of all endeavours to prevent it. When the inflammation and swelling continue, and it is evident that a suppuration will ensue, it ought to be promoted by drawing the steam of warm water into the throat through a tunnel or the like. Soft poultices ought likewise to be applied outwardly, and the patient may keep a roasted fig constantly in his mouth.

* Dr Home.

It sometimes happens, before the tumour breaks, that the swelling is so great, as entirely to prevent any thing from getting down into the stomach. In this case the patient must inevitably perish, unless he can be supported in some other way. This can only be done by nourishing clysters of broth, or gruel, with milk, &c. Patients have often been supported by these for several days, till the tumour has broke; and afterwards they have recovered.

Not only the swallowing, but the breathing, is often prevented by the tumour. In this case nothing can save the patient's life, but opening the *trachea* or windpipe. As that has been often done with success, no person, in such desperate circumstances, ought to hesitate a moment about the operation; but as it can only be performed by a surgeon, it is not necessary here to give any directions about it.

When a difficulty of swallowing is not attended with an acute pain or inflammation, it is generally owing to an obstruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey: to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of an inflammation. This species of *angina* has various names among the common people, as *the pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they lift up the patient by the hair of the head, and thrust their fingers under his jaws, &c.; all which practices are at best useless, and often hurtful.

Those who are subject to inflammations of the throat, in order to avoid that disease, ought to live temperate. Such as do not choose to observe this rule, must have frequent recourse to purging and other evacuations, to discharge the superfluous humours. They ought likewise to beware of catching cold, and should abstain from aliment or medicines of an astringent or stimulating nature.

Violent exercise, by increasing the motion and force of the blood, is apt to occasion an inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease ought therefore, after speaking aloud, singing, running, drinking warm liquor, or doing any

thing that may strain the throat, or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap some additional covering about their necks.

I have often known persons who had been subject to sore throats, entirely freed from that complaint by only wearing a riband, or a bit of flannel, constantly about their necks, or by wearing thicker shoes, a flannel waistcoat, or the like. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after persons have been accustomed to them; but surely the inconveniency of using such things for life, is not to be compared with the danger which may attend the neglect of them.

Sometimes, after an inflammation, the glands of the throat continue swelled, and become hard and callous. This complaint is not easily removed, and is often rendered dangerous by the too frequent application of strong stimulating and styptic medicines. The best method is to keep it warm, and to gargle it twice a day with a decoction of figs, sharpened a little with the elixir or spirit of vitriol.

OF THE MALIGNANT QUINSEY, OR PUTRID ULCEROUS SORE THROAT.

This kind of quinsey is but little known in the northern parts of Britain, though for some time past it has been fatal in the more southern counties. Children are more liable to it than adults, females than males, and the delicate than those who are hardy and robust. It prevails chiefly in autumn, and is most frequent after a long course of damp or sultry weather.

Causes.—This is evidently a contagious distemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one person. This ought to put people upon their guard against going near such patients as labour under the disorder; as by that means they endanger not only their own lives, but likewise those of their friends and connections. Whatever tends to produce putrid or malignant fevers, may likewise occasion the putrid ulcerous sore throat, as unwholesome air, damaged provisions, neglect of cleanliness, &c.

Symptoms.—It begins with alternate fits of shivering

and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The patient complains greatly of weakness and oppression of the breast; his spirits are low, and he is apt to faint away when set upright; he is troubled with a nausea, and often with a vomiting or purging. The two latter are most common in children. The eyes appear red and watery, and the face swells. The urine is at first pale and crude; but, as the disease advances, it turns more of a yellowish colour. The tongue is white, and generally moist, which distinguishes this from an inflammatory disease. Upon looking into the throat, it appears swelled, and of a florid red colour. Pale or ash-coloured spots, however, are here and there interspersed, and sometimes one broad patch or spot, of an irregular figure, and pale white colour, surrounded with florid red, only appears. These whitish spots or sloughs cover so many ulcers.

An efflorescence, or eruption upon the neck, arms, breast, and fingers, about the second or third day, is a common symptom of this disease. When it appears, the purging and vomiting generally cease.

There is often a slight degree of delirium, and the face frequently appears bloated, and the inside of the nostrils red and inflamed. The patient complains of a disagreeable putrid smell, and his breath is very offensive.

The putrid ulcerous sore throat may be distinguished from the inflammatory, by the vomiting and looseness with which it is generally ushered in; the foul ulcers in the throat covered with a white or livid coat; and by the excessive weakness of the patient; with other symptoms of a putrid fever.

Unfavourable symptoms are, an obstinate purging, extreme weakness, dimness of the sight, a livid or black colour of the spots, and frequent shiverings, with a weak, fluttering pulse. If the eruption upon the skin suddenly disappears, or becomes of a livid colour, with a discharge of blood from the nose or mouth, the danger is very great.

If a gentle sweat break out about the third or fourth day, and continue with a slow, firm, and equal pulse; if the sloughs cast off in a kindly manner, and appear clean and florid at the bottom; and if the breathing is soft and free, with a lively colour of the eyes, there is reason to hope for a salutary crisis.

Regimen.—The patient must be kept quiet, and for the most part in bed, as he will be apt to be faint, when taken out of it. His food must be nourishing and restorative; as sago-gruel with red wine, jellies, strong broths, &c. His drink ought to be generous, and of an antiseptic quality; as red wine negus, white wine whey, and such like.

Medicine.—The medicine in this kind of quinsey is entirely different from that which is proper in the inflammatory. All evacuations, as bleeding, purging, &c. which weaken the patient, must be avoided. Cooling medicines, as nitre and cream of tartar, are likewise hurtful. Strengthening cordials alone can be used with safety; and these ought never to be neglected.

If at the beginning there is a great nausea, or inclination to vomit, the patient must drink an infusion of green tea, camomile flowers, or *carduus benedictus*, in order to cleanse the stomach. If these are not sufficient, he may take a few grains of the powder of ipecacuanha, or any other gentle vomit.

If the disease be mild, the throat may be gargled with an infusion of sage and rose leaves, to a gill of which may be added a spoonful or two of honey, and as much vinegar as will make it agreeably acid; but when the symptoms are urgent, the sloughs large and thick, and the breath very offensive, the following gargle may be used:

To six or seven ounces of the pectoral decoction, when boiling, add half an ounce of contrayerva-root; let it boil for some time, and afterwards strain the liquor; to which add two ounces of white-wine vinegar, an ounce of fine honey, and an ounce of the tincture of myrrh. This ought not only to be used as a gargle, but a little of it should frequently be injected with a syringe, to clean the throat before the patient takes any meat or drink. This method is peculiarly necessary for children, who cannot use a gargle.

It will be of great benefit if the patient frequently receives into his mouth, through an inverted funnel, the steams of warm vinegar, myrrh, and honey.

But when the putrid symptoms run high, and the disease is attended with danger, the only medicine that can be depended upon is the Peruvian bark. It may be taken in substance, if the patient's stomach will bear it. If not, an ounce of bark grossly powdered, with two drams of Virgi-

nian snake-root, may be boiled with an English pint and a half of water to half a pint; to which a tea-spoonful of the elixir of vitriol may be added, and an ordinary tea-cupful of it taken every three or four hours. Blistering-plasters are very beneficial in this disease, especially when the patient's pulse and spirits are low. They may be applied to the throat, behind the ears, or upon the back part of the neck.

Should the vomiting prove troublesome, it will be proper to give the patient two table spoonfuls of the saline julep, every hour. Tea made of mint and a little cinnamon will be very proper for his ordinary drink, especially if an equal quantity of red wine be mixed with it.

In case of a violent looseness, the size of a nutmeg of *diascordium*, or the japonic confection, may be taken two or three times a-day, or oftener if necessary.

If a discharge of blood from the nose happens, the steams of warm vinegar may be received up the nostrils frequently; and the drink must be sharpened with spirits of vitriol, or tincture of roses.

In cases of a stranguary, the belly must be fomented with warm water and emollient clysters given three or four times a-day.

After the violence of the disease is over, the body should still be kept open with mild purgatives; as manna, senna, rhubarb, or the like.

If great weakness and dejection of spirits, or night-sweats, with other symptoms of a consumption, should ensue, we would advise the patient to continue the use of the Peruvian bark, with the elixir of vitriol, and to take frequently a glass of generous wine. These, together with a nourishing diet, and riding on horseback, are the most likely means for recovering his strength.

The quinsey is generally caught by exposing the throat to a current of cold air from an open window in a room, or still more in a carriage, especially in cold damp weather, or in the night.

The inflammatory sore throat is generally cured by the method of treatment recommended above: yet sometimes there are cases where the patient loses the power of swallowing, and dies from the mere want of sustenance. An ingenious surgeon, in a case of this kind, saved his patient by

fastening a tunnel to the skin of an eel, open at both ends, and, by means of a flexible probe, pushing one end down the gullet till it entered the stomach, by which channel the proper sustenance was conveyed.

In the malignant quinsey not a moment should be lost in procuring the best medical assistance that can be obtained; the smallest delay may be attended with irreparable injury.

CHAP. XXIX.

OF COLDS AND COUGHS.

It has already been observed, that colds are the effect of an obstructed perspiration; the common causes of which we have likewise endeavoured to point out, and shall not here repeat them. Neither shall we spend time in enumerating all the various symptoms of colds, as they are pretty generally known. It may not, however, be amiss to observe, that almost every cold is a kind of fever, which only differs in degree from some of those that have already been treated of.

No age, sex, or constitution, is exempted from this disease; neither is it in the power of any medicine or regimen to prevent it. The inhabitants of every climate are liable to catch cold, nor can even the greatest circumspection defend them at all times from its attacks. Indeed, if the human body could be kept constantly in an uniform degree of warmth, such a thing as catching cold would be impossible; but as that cannot be effected by any means, the perspiration must be liable to many changes. Such changes, however, when small, do not affect the health; but, when great, they must prove hurtful.

When oppression of the breast, a stuffing of the nose, unusual weariness, pain of the head, &c. give ground to believe that the perspiration is obstructed, or, in other words, that the person has caught cold, he ought immediately to lessen his diet, at least the usual quantity of his solid food, and to abstain from all strong liquors. Instead of flesh, fish, eggs, milk, and other nourishing diet, he may eat light bread-pudding, veal or chicken broth, panado, gruels, and such like. His drink may be water-gruel sweetened with

a little honey; an infusion of balm, or linseed sharpened with the juice of bitter orange or lemon; a decoction of barley and liquorice with tamarinds, or any other cool, diluting, acid liquor.

Above all, his supper should be light; as small posset, or water-gruel sweetened with honey, and a little toasted bread in it. If honey should disagree with the stomach, the gruel may be sweetened with treacle or coarse sugar, and sharpened with the jelly of currants. Those who have been accustomed to generous liquors may take wine-whey instead of gruel, which may be sweetened as above.

The patient ought to lie longer than usual in bed, and to encourage a gentle sweat, which is easily brought on towards morning by drinking tea, or any kind of warm diluting liquor. I have often known this practice carry off a cold in one day, which in all probability, had it been neglected, would have cost the patient his life, or have confined him for some months. Would people sacrifice a little time to ease and warmth, and practise a moderate degree of abstinence when the first symptoms of a cold appear, we have reason to believe that most of the bad effects which flow from an obstructed perspiration might be prevented. But, after the disease has gathered strength by delay, all attempts to remove it often prove vain. A pleurisy, a peripneumony, or a fatal consumption of the lungs, are the common effects of colds which have either been totally neglected, or treated improperly.

Many attempt to cure a cold by getting drunk; but this, to say no worse of it, is a very hazardous experiment. No doubt it may sometimes succeed, by suddenly restoring the perspiration; but when there is any degree of inflammation, which is frequently the case, strong liquors, instead of removing the malady, will increase it. By this means a common cold may be converted into an inflammatory fever.

When those who labour for their daily bread have the misfortune to catch cold, they cannot afford to lose a day or two, in order to keep themselves warm, and take a little medicine; by which means the disorder is often so aggravated as to confine them for a long time, or even to render them ever after unable to sustain hard labour. But even such of the labouring poor as can afford to take care of themselves, are often too hardy to do it; they affect to de-

spise colds, and as long as they can crawl about, scorn to be confined by what they call a *common cold*. Hence it is that colds destroy such numbers of mankind. Like an enemy despised, they gather strength from delay, till at length they become invincible. We often see this verified in travellers, who, rather than lose a day in the prosecution of their business, throw away their lives by pursuing their journey, even in the severest weather, with this disease upon them.

It is certain, however, that colds may be too much indulged. When a person, for every slight cold, shuts himself up in a warm room, and drinks great quantities of warm liquor, it may occasion such a general relaxation of the solids as will not be easily removed. It will, therefore, be proper, when the disease will permit, and the weather is mild, to join to the regimen mentioned above, gentle exercise; as walking, riding on horseback, &c. An obstinate cold, which no medicine will remove, will yield to gentle exercise and a proper regimen of the diet.

Bathing the feet and legs in warm water has a great tendency to restore the perspiration. But care must be taken that the water be not too warm, otherwise it will do hurt. It should never be much warmer than the blood, and the patient should go immediately to bed after using it. Bathing the feet in warm water, lying in bed, and drinking warm water-gruel, or other weak liquors, will sooner take off a spasm, and restore perspiration, than all the hot sudorific medicines in the world. This is all that is necessary for removing a common cold; and if this course be taken at the beginning, it will seldom fail.

But when the symptoms do not yield to abstinence, warmth, and diluting liquors, there is reason to fear the approach of some other disease, as an inflammation of the breast, an ardent fever, or the like. If the pulse, therefore, be hard and frequent, the skin hot and dry, and the patient complains of his head or breast, it will be necessary to bleed, and to give the cooling powders recommended in the scarlet fever, every three or four hours, till they give a stool.

It will likewise be proper to put a blistering plaster on the back, to give two table-spoonfuls of the saline mixture every two hours, and in short, to treat the patient in all respects as for a slight fever. I have often seen this course, when observed at the beginning, remove the complaint in

two or three days, when the patient had all the symptoms of an approaching ardent fever, or an inflammation of the breast.

The chief secret of preventing colds lies in avoiding, as far as possible, all extremes either of heat or cold, and in taking care, when the body is heated, to let it cool gradually. These and other circumstances relating to this important subject are so fully treated of under the article *Obstructed Perspiration*, that it is needless here to resume the consideration of them.

OF A COMMON COUGH.

A cough is generally the effect of a cold, which has either been improperly treated, or entirely neglected. When it proves obstinate, there is always reason to fear the consequences, as this shews a weak state of the lungs, and is often the forerunner of consumption.

If the cough be violent, and the patient young and strong, with a hard quick pulse, bleeding will be proper; but in weak and relaxed habits, bleeding rather prolongs the disease. When the patient spits freely, bleeding is unnecessary, and sometimes hurtful, as it tends to lessen that discharge.

When the cough is not attended with any degree of fever, and the spittle is viscid and tough, sharp pectoral medicines are to be administered; as gum-ammoniac, squills, &c. Two table-spoonfuls of the solution of gum-ammoniac may be taken three or four times a-day, more or less according to the age and constitution of the patient. Squills may be given various ways; two ounces of the vinegar, the oxymel, or the syrup, may be mixed with the same quantity of simple cinnamon-water, to which may be added an ounce of common water, and an ounce of balsamic syrup. Two table-spoonfuls of this mixture may be taken three or four times a-day.

A syrup made of equal parts of lemon juice, honey, and sugar-candy, is likewise very proper in this kind of cough. A table spoonful of it may be taken at pleasure.

But when the defluxion is sharp and thin, these medicines rather do hurt. In this case gentle opiates, oils, and mucilages, are more proper. A cup of an infusion of wild

poppy leaves, and marsh-mallow roots, or the flowers of colts-foot, may be taken frequently; or a tea-spoonful of the paregoric elixir may be put into the patient's drink twice a-day. Fuller's Spanish infusion is also a very proper medicine in this case, and may be taken in the quantity of a tea-cupful three or four times a day.

When a cough is occasioned by acrid humours tickling the throat and *fauces*, the patient should keep some soft pectoral lozenges almost constantly in his mouth; as the Pontefract liquorice-cakes, barley-sugar, the common balsamic lozenges, Spanish juice, &c. These blunt the acrimony of the humours, and by taking off their stimulating quality, help to appease the cough.*

In obstinate coughs, proceeding from a flux of humours upon the lungs, it will often be necessary, besides expectorating medicines, to have recourse to issues, setons, or some other drain. In this case I have often observed the most happy effects from a Burgundy pitch plaster applied between the shoulders. I have ordered this simple remedy in the most obstinate coughs, in a great number of cases, and in many different constitutions, without ever knowing it fail to give relief, unless where there were evident signs of an ulcer in the lungs.

About the bulk of a nutmeg of Burgundy-pitch may be spread thin upon a piece of soft leather, about the size of the hand, and laid between the shoulder-blades. It may be taken off and wiped every three or four days, and ought to be renewed once a fortnight or three weeks. This is indeed a cheap and simple medicine, and consequently apt to be despised; but we will venture to affirm, that the whole *materia medica* does not afford an application more efficacious in almost every kind of cough. It has not indeed always an immediate effect; but, if kept on for some time, it will succeed where most other medicines fail.

The only inconveniency attending this plaster is the itch-

* In a former edition of this book I recommended for an obstinate tickling cough, an oily emulsion, made with the paregoric elixir of the Edinburgh Dispensatory, instead of the common alkaline spirit. I have since been told by several practitioners, that they found it to be an excellent medicine in this disorder, and every way deserving of the character which I had given it. Where this elixir is not kept, its place may be supplied by adding to the common oily emulsion, an adequate proportion of the *Thebaic Tincture*, or liquid laudanum.

ing which it occasions; but surely this may dispensed with, considering the advantage which the patient may expect to reap from the application; besides, when the itching becomes very uneasy, the plaster may be taken off, and the part rubbed with a dry cloth, or washed with a little warm milk and water. Some caution indeed is necessary in discontinuing the use of such a plaster; this, however, may be safely done by making it smaller by degrees, and at length quitting it altogether in a warm season.*

But coughs proceed from many other causes besides defluxions upon the lungs. In these cases the cure is not to be attempted by pectoral medicines. Thus, in a cough proceeding from a foulness and debility of the stomach, syrups, oils, mucilages, and all kinds of balsamic medicines, do hurt. The *stomach cough* may be known from one that is owing to a fault in the lungs by this, that in the latter the patient coughs whenever he inspires, or draws in his breath fully; but in the former that does not happen.

The cure of this cough depends chiefly upon cleansing and strengthening the stomach; for which purpose gentle vomits and bitter purgatives are most proper. Thus, after a vomit or two, the sacred tincture, as it is called, may be taken for a considerable time in the dose of one or two table-spoonfuls twice a-day, or as often as it is found necessary, to keep the body gently open. People may make this tincture themselves, by infusing an ounce of *hiera picra* in an English pint of white wine, letting it stand a few days, and then straining it off for use.

In coughs which proceed from a debility of the stomach, the Peruvian bark is likewise of considerable service. It may either be chewed, taken in powder, or made into a tincture along with other stomachic bitters.

A *nervous cough* can only be removed by change of air, and proper exercise; to which may be added the use of gentle opiates. Instead of the saponaceous pill, the paregoric elixir, &c. which are only opium disguised, ten, fifteen, twenty, or twenty-five drops of liquid laudanum, more or

* Some complain that the pitch plaster adheres too fast, while others find difficulty in keeping it on This proceeds from the different kinds of pitch made use of, and likewise from the manner of making it. I generally find it answer best when mixed with a little bees wax, and spread as cool as possible. The clear, hard, transparent pitch, answers the purpose best.

less as circumstances require, may be taken at bed-time, or when the cough is most troublesome. Immersing the feet and hands in warm water will often appease the violence of a nervous cough.

When a cough is only the symptom of some other malady, it is in vain to attempt to remove it without first curing the disease from which it proceeds. Thus, when a cough is occasioned by *teething*, keeping the body open, scarifying the gums, or whatever facilitates the cutting of the teeth, likewise appeases the cough. In like manner, when *worms* occasion a cough, such medicines as remove these vermin will generally cure the cough; as bitter purgatives, oily clysters, and such like.

Women, during the last months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding, and keeping the body gently open. They ought to avoid all flatulent food, and to wear a loose easy dress.

A cough is not only a symptom, but is often likewise the forerunner of diseases. Thus, the gout is frequently ushered in by a very troublesome cough, which affects the patient for some days before the coming on of the fit. This cough is generally removed by a paroxysm of the gout, which should therefore be promoted, by keeping the extremities warm, drinking warm liquors, and bathing the feet and legs frequently in lukewarm water.

OF THE HOOPING-COUGH, OR CHIN-COUGH.

This cough seldom affects adults, but proves often fatal to children. Such children as live upon thin watery diet, who breathe unwholesome air, and have too little exercise, are most liable to this disease, and generally suffer most from it.

The chin-cough is so well known, even to nurses, that a description of it is unnecessary. Whatever hurts the digestion, obstructs the perspiration, or relaxes the solids, disposes to this disease; consequently its cure must depend upon cleansing and strengthening the stomach, bracing the solids, and at the same time promoting perspiration and the different secretions.

The diet must be light, and of easy digestion; for children, good bread made into pap or pudding, chicken-broth,

with other light spoon meats, are proper; but those who are farther advanced may be allowed sago-gruel, and if the fever be not high, a little boiled chicken, or other white meats. The drink may be hyssop, or penny-royal tea, sweetened with honey or sugar-candy; small wine-whey; or, if the patient be weak, he may sometimes be allowed a little negus.

One of the most effectual remedies in the chin-cough is change of air. This often removes the malady, even when the change seems to be from a purer to a less wholesome air. This may in some measure depend on the patient's being removed from the place where the infection prevails. Most of the diseases of children are infectious; nor is it at all uncommon to find the chin-cough prevailing in one town or village, when another at a very small distance is quite free from it. But whatever be the cause, we are sure of the fact. No time ought therefore to be lost in removing the patient at some distance from the place where he caught the disease, and, if possible, into a more pure and warm air.*

When the disease proves violent, and the patient is in danger of being suffocated by the cough, he ought to be bled, especially if there be a fever with a hard full pulse. But as the chief intention of bleeding is to prevent an inflammation of the lungs, and to render it more safe to give vomits, it will seldom be necessary to repeat the operation; yet if there are symptoms of an inflammation of the lungs, a second or even a third bleeding may be requisite.

It is generally reckoned a favourable symptom when a fit of coughing makes the patient vomit. This cleanses the stomach, and greatly relieves the cough. It will therefore be proper to promote this discharge, by small doses of ipecacuanha.

It is very difficult to make children drink after a vomit. I have often seen them happily deceived, by infusing a scruple or half a dram of the powder of ipecacuanha in a tea-pot, with half an English pint of boiling water. If this be disguised with a few drops of milk and a little sugar, they

* Some think the air ought not to be changed till the disease is on the decline: but there seems to be no sufficient reason for this opinion, as patients have been known to reap benefit from a change of air at all periods of the disease. It is not sufficient to take the patient out daily in a carriage. This seldom answers any good purpose; but often does hurt, by giving him cold.

will imagine it tea, and drink it very greedily. A small tea-cupful of this may be given every quarter of an hour, or rather every ten minutes, till it operates. When the child begins to puke, there will be no occasion for drinking any more, as the water already on the stomach will be sufficient.

Vomits not only cleanse the stomach, which in this disease is generally loaded with viscid phlegm, but they likewise promote the perspiration and other secretions, and ought therefore to be repeated according to the obstinacy of the disease. They should not however be strong; gentle vomits frequently repeated are both less dangerous, and more beneficial than strong ones.

The body ought to be kept gently open. The best medicines for this purpose are rhubarb and its preparations, as the syrup, tincture, &c. Of these a tea-spoonful or two may be given to an infant twice or thrice a-day, as there is occasion. To such as are further advanced, the dose must be proportionably increased, and repeated till it has the desired effect. Those who cannot be brought to take the bitter tincture, may have an infusion of senna and prunes, sweetened with manna, coarse sugar, or honey; or a few grains of rhubarb mixed with a tea-spoonful or two of syrup, or currant-jelly, so as to disguise the taste. Most children are fond of syrups and jellies, and seldom refuse even a disagreeable medicine when mixed with them.

Many people believe that oily, pectoral, and balsamic medicines possess wonderful virtues for the cure of the chin-cough, and accordingly exhibit them plentifully to patients of every age and constitution, without considering that every thing of this nature must load the stomach, hurt the digestion, and of course aggravate the disorder.*

The *millepedes*, or wood-lice, are greatly recommended for the cure of a chin-cough. Those who choose to make use of these insects may infuse two ounces of them bruised in an English pint of small white wine for one night. Afterwards the liquor may be strained through a cloth, and a table spoonful of it given to the patient three or four times a-day.

* Dr DUPLANIL says, he has seen many good effects from the kermes mineral in this complaint, the cough being frequently alleviated even by the first dose. The dose for a child of one year old is a quarter of a grain dissolved in a cup of any liquid, repeated two or three times a-day. For a child of two years the dose is half a grain; and the quantity must be thus increased in proportion to the age of the patient.

Opiates are sometimes necessary to allay the violence of the cough. For this purpose a little of the syrup of poppies, or five, six, or seven drops of laudanum, according to the age of the patient, may be taken in a cup of hyssop or penny-royal tea, and repeated occasionally.*

The garlic ointment is a well known remedy in North Britain for the chin-cough. It is made by beating in a mortar garlic with an equal quantity of hogslard. With this the soles of the feet may be rubbed twice or thrice a-day; but the best method is to spread it upon a rag, and apply it in the form of a plaster. It should be renewed every night and morning at least, as the garlic soon loses its virtues. This is an exceeding good medicine both in the chincough,† and in most other colds of an obstinate nature. It ought not, however, to be used when the patient is very hot and feverish, lest it should increase these symptoms.

The feet should be bathed once every two or three days in luke warm water; and a Burgundy-pitch plaster kept constantly between the shoulders. But when the disease proves very violent, it will be necessary, instead of it, to apply a blistering-plaster, and to keep the part open for some time with issue ointment.

When the disease is prolonged, and the patient is free from fever, the Peruvian bark, and other bitters, are the most proper medicines. The bark may either be taken in substance, or in a decoction or infusion, as is most agreeable. For a child, ten, fifteen, or twenty grains, according to the age of the patient, may be given three or four times a-day. For an adult half a dram or two scruples will be proper. Some give the extract of the bark with cantharides · but to manage this requires a considerable attention. It is more safe to give a few grains of castor along with the bark. A child of six or seven years of age may take seven or eight grains of castor, with fifteen grains of powdered bark, for a dose. This may be made into a mixture, with two or three ounces of any simple distilled water, and a little syrup, and taken three or four times a-day.

* Some recommend the extract of hemlock as an extraordinary remedy in the hooping-cough; but so far as I have been able to observe, it is no way superior to opium, which, when properly administered, will often relieve some of the most troublesome symptoms of this disorder.

† As this disease is evidently spasmodic, I am inclined to think that tonic medicines will in time be found the most proper for its cure.

CHAP. XXX.

INFLAMMATION OF THE STOMACH, AND OTHER VISCERA.

All inflammations of the bowels are dangerous, and require the most speedy assistance, as they frequently end in a suppuration and sometimes in a mortification, which is certain death.

Causes.—An inflammation of the stomach may proceed from any of the causes which produce an inflammatory fever; as cold liquor drunk while the body is warm, obstructed perspiration, or the sudden striking in of any eruption. It may likewise proceed from the acrimony of the bile, or from acrid and stimulating substances taken into the stomach; as strong vomits or purges, corrosive poisons, and such like. When the gout has been repelled from the extremities, either by cold or improper applications, it often occasions an inflammation of the stomach. Hard or indigestible substances taken into the stomach, as bones, the stones of fruits, &c. may likewise have that effect.

Symptoms.—It is attended with a fixed pain and burning heat in the stomach; great restlessness and anxiety; a small, quick, and hard pulse; vomiting, or at least a nausea, and sickness; excessive thirst; coldness of the extremities; difficulty of breathing; cold clammy sweats; and sometimes convulsions and fainting fits. The stomach is swelled, and often feels hard to the touch. One of the most certain signs of this disease is the sense of pain which the patient feels upon taking any kind of food or drink, especially if it be either too hot or too cold.

When the patient vomits every thing he eats or drinks, is extremely restless, has a hiccup, with an intermitting pulse, and frequent fainting fits, the danger is very great.

Regimen.—All acrimonious, heating, and irritating food and drink are carefully to be avoided. The weakness of the patient may deceive the by-standers, and induce them to give him wines, spirits, or other cordials; but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit may likewise impose on the attendants, and make them think a vomit necessary; but that too is almost certain death.

The food must be light, thin, cool, and easy of digestion. It must be given in small quantities, and should neither be quite cold, nor too hot. Thin gruel made of barley or oatmeal, light toasted bread dissolved in boiling water, or very weak chicken-broth, are the most proper. The drink should be clear whey, barley-water, water in which toasted bread has been boiled, or decoctions of emollient vegetables, as liquorice, and marsh-mallow roots, sarsaparilla, or the like.

MEDICINE.—Bleeding in this disease is absolutely necessary, and is almost the only thing that can be depended on. When the disease proves obstinate, it will often be proper to repeat this operation several times; nor must the low state of the pulse deter us from doing so. The pulse indeed generally rises upon bleeding, and as long as that is the case, the operation is safe.

Frequent fomentations with lukewarm water, or a decoction of emollient vegetables, are likewise beneficial. Flannel cloths dipped in these must be applied to the region of the stomach, and removed as they grow cool. They must neither be applied too warm, nor be suffered to continue till they become quite cold, as either of these extremes would aggravate the disease.

The feet and legs ought likewise to be frequently bathed in lukewarm water, and warm bricks or poultices may be applied to the soles of the feet. The warm bath, if it can be conveniently used, will be of great service.

In this, and all other inflammations of the bowels, an epispastic, or blistering-plaster, applied over the part affected, is one of the best remedies I know. I have often used it, and do not recollect one instance wherein it did not give relief to the patient.

The only internal medicines which we shall venture to recommend in this disease, are mild clysters. These may be made of warm water, or thin water-gruel; and if the patient be costive, a little sweet oil, honey, or manna, may be added. Clysters answer the purpose of an internal fomentation, while they keep the body open, and at the same time nourish the patient, who is often in this disease unable to retain any food upon his stomach. For these reasons they must not be neglected, as the patient's life may depend on them.

INFLAMMATION OF THE INTESTINES.

This is one of the most painful and dangerous diseases to which mankind are liable. It generally proceeds from the same causes as the inflammation of the stomach; to which may be added costiveness, worms, eating unripe fruits, or great quantities of nuts, drinking hard windy malt liquors, as stale bottled beer or ale, sour wine, cyder, &c. It may likewise be occasioned by a rupture, by schirrous tumours of the intestines, or by their opposite sides growing together.

The inflammation of the intestines is denominated *Iliac passion*, *Enteritis*, &c. according to the name of the parts affected. The treatment, however, is nearly the same whatever part of the intestinal canal be the seat of the disease; we shall therefore omit these distinctions, lest they should perplex the reader.

The *symptoms* here are nearly the same as in the foregoing disease; only the pain, if possible, is more acute, and is situated lower. The vomiting is likewise more violent, and sometimes even the excrements, together with the clysters, are discharged by the mouth. The patient is continually belching up wind, and has often an obstruction of his urine.

While the pain shifts, and the vomiting only returns at certain intervals, and while the clysters pass downwards, there is ground for hope; but when the clysters and *fæces* are vomited, and the patient is exceeding weak, with a low fluttering pulse, a pale countenance, and a disagreeable or stinking breath, there is great reason to fear that the consequences will prove fatal. Clammy sweats, black fœtid stools, with a small intermitting pulse, and a total cessation of pain, are the signs of a mortification already begun, and of approaching death.

Regimen.—The regimen in this disease, is in general the same as in an inflammation of the stomach. The patient must be kept quiet, avoiding cold, and all violent passions of the mind. His food ought to be very light, and given in small quantities; his drink weak and diluting; as clear whey, barley-water, and such like.

Medicine.—Bleeding in this, as well as in the inflammation of the stomach, is of the greatest importance. It should be performed as soon as the symptoms appear, and must be

repeated according to the strength of the patient and the violence of the disease.

A blistering-plaster is here likewise to be applied immediately over the part where the most violent pain is.

This not only relieves the pain of the bowels, but even clysters and purgative medicines, which before had no effect, will operate when the blister begins to rise.

Fomentations and laxative clysters are by no means to be omitted. The patient's feet and legs should frequently be bathed in warm water; and cloths dipped in it applied to his belly. Bladders filled with warm water may likewise be applied to the region of the navel, and warm bricks, or bottles filled with warm water, to the soles of the feet. The clysters may be made of barley-water, or thin gruel with salt, and softened with sweet oil or fresh butter. These may be administered every two or three hours, or oftener, if the patient continues costive.

If the disease does not yield to clysters and fomentations, recourse must be had to pretty strong purgatives; but as these, by irritating the bowels, often increase their contraction, and by that means frustrate their own intention, it will be necessary to join them with opiates, which, by allaying the pain, and relaxing the spasmodic contractions of the guts, greatly assist the operation of purgatives in this case.

What answers the purpose of opening the body very well, is a solution of the bitter purging salts. Two ounces of these may be dissolved in an English pint of warm water, or thin gruel, and a tea-cupful of it taken every half hour till it operates. At the same time fifteen, twenty, or twenty-five drops of laudanum may be given in a glass of peppermint or simple cinnamon-water, to appease the irritation, and prevent the vomiting, &c.

Acids have often a very happy effect in staying the vomiting, and appeasing the other violent symptoms of this disease. It will therefore be of use to sharpen the patient's drink with cream of tartar, juice of lemon, or, when these cannot be obtained, with vinegar.

But it often happens that no liquid whatever will stay on the stomach. In this case the patient must take purging pills. I have generally found the following answer very well: Take jalap in powder, and vitriolated tartar, of each half a dram, opium one grain, Castile soap as much as will

make the mass fit for pills. These must be taken at one dose, and if they do not operate in a few hours, the dose may be repeated.

If a stool cannot be procured by any of the above means, it will be necessary to immerse the patient in warm water, up to the breast. I have often seen this succeed when other means had been tried in vain. The patient must continue in the water as long as he can easily bear it without fainting and if one immersion has not the desired effect, it may be repeated as soon as the patient's strength and spirits are recruited. It is more safe for him to go frequently into the bath, than to continue too long at a time; and it is often necessary to repeat it several times before it has the desired effect.

It has sometimes happened, after all other means of procuring a stool had been tried to no purpose, that this was brought about by immersing the patient's lower extremities in cold water, or making him walk upon a wet pavement, and dashing his legs and thighs with the cold water. This method, when others fail, at least merits a trial. It is indeed attended with some danger; but a doubtful remedy is better than none.

In desperate cases it is common to give quicksilver. This may be given to the quantity of several ounces, or even a pound, but should not exceed that.* When there is reason to suspect a mortification of the guts, this medicine ought not to be tried. In that case it cannot cure the patient, and will only hasten his death. But when the obstruction is occasioned by any cause that can be removed by force, quicksilver is not only a proper medicine, but the best that can be administered, as it is the fittest body we know for making its way through the intestinal canal.

If the disease proceeds from a rupture, the patient must be laid with his head very low, and the intestines returned by gentle pressure with his hand. If this, with fomentations and clysters, should not succeed, recourse must be had to surgical operation, which may give the patient relief.

Such as would avoid this excruciating and dangerous disease, must take care never to be too long without a stool.

* When quicksilver is given in too large quantities it defeats its own intention, as it drags down the bottom of the stomach, which prevents its getting over the Pylorus. In this case the patient should be suspended by the heels, in order that the quicksilver may be discharged by his mouth.

Some who have died of it have had several pounds of hard dry *fæces* taken out of their guts. They should likewise beware of eating too freely of sour or unripe fruits, or drinking stale windy liquors, &c. I have known it brought on by living too much on baked fruits, which are seldom good. It likewise proceeds frequently from cold caught by wet clothes, &c. but especially from wet feet.

OF THE COLIC.

The colic has a great resemblance to the two preceding diseases, both in its symptoms and method of cure. It is generally attended with costiveness and acute pain of the bowels; and requires diluting diet, evacuations, fomentations, &c.

Colics are variously denominated according to their causes, as the *flatulent*, the *bilious*, the *hysteric*, the *nervous*, &c. As each of these requires a particular method of treatment, we shall point out their most general symptoms, and the means to be used for their relief.

The *flatulent*, or wind colic, is generally occasioned by an indiscreet use of unripe fruits, meats of hard digestion, windy vegetables, fermenting liquors, and such like. It may likewise proceed from an obstructed perspiration, or catching cold. Delicate people, whose digestive powers are weak, are most liable to this kind of colic.

The flatulent colic may either affect the stomach or intestines. It is attended with a painful stretching of the affected part. The patient feels a rumbling in his bowels and is generally relieved by a discharge of wind either upwards or downwards. The pain is seldom confined to any particular part, as the vapour wanders from one division of the bowels to another till it finds a vent.

When the disease proceeds from windy liquor, green fruits, sour herbs, or the like, the best medicine on the first appearance of the symptoms is a dram of brandy, gin, or any good spirits. The patient should likewise sit with his feet upon a warm hearth-stone, or apply warm bricks to them, and warm cloths may be applied to his stomach and bowels.

This is the only colic wherein ardent spirits, spiceries, or any thing of a hot nature, may be ventured upon. Nor indeed are they to be used here unless at the very beginning,

before any symptoms of inflammation appear. We have reason to believe, that the colic occasioned by windy or flatulent food might always be cured by spirits and warm liquors, if they were taken immediately upon perceiving the first uneasiness; but when the pain has continued for a considerable time, and there is reason to fear an inflammation of the bowels is already begun, all hot things are to be avoided as poison, and the patient is to be treated in the same manner as for the inflammation of the intestines.

Several kinds of food, as honey, eggs, &c. occasion colics in some particular constitutions. I have generally found the best method of cure for these was to drink plentifully of small diluting liquors, as water-gruel, small posset, toast and water, &c.

Colics which proceed from excess and indigestion, generally cure themselves by occasioning vomiting or purging. These discharges are by no means to be stopped, but promoted by drinking plentifully of warm water, or weak posset. When their violence is over, the patient may take a dose of rhubarb, or any other gentle purge, to carry off the dregs of his debauch.

Colics which are occasioned by wet feet, or catching cold, may generally be removed at the beginning by bathing the feet and legs in warm water, and drinking such warm diluting liquors as will promote the perspiration, as weak wine-whey, or water-gruel with a small quantity of spirits in it.

Those flatulent colics, which prevail so much among country people, might generally be prevented were they careful to change their clothes when they get wet. They ought likewise to take a dram, or to drink some warm liquor after eating any kind of green trash. We do not mean to recommend the practice of dram-drinking, but in this case ardent spirits prove a real medicine, and indeed the best that can be administered. A glass of good peppermint water will have nearly the same effect as a glass of brandy, and in some cases is rather to be preferred.

The *bilious* colic is attended with very acute pains about the region of the navel. The patient complains of great thirst, and is generally costive. He vomits a hot, bitter, yellow-coloured bile, which being discharged, seems to afford some relief, but is quickly followed by the same violent pain as before. As the distemper advances, the propensity

to vomit sometimes increases so as to become almost continual, and the proper motion of the intestines is so far perverted, that there are all the symptoms of an impending iliac passion.

If the patient be young and strong, and the pulse full and frequent, it will be proper to bleed, after which clysters may be administered. Clear whey or gruel, sharpened with the juice of lemon, or cream of tartar, must be drank freely. Small chicken-broth, with a little manna dissolved in it, or a slight decoction of tamarinds, is likewise very proper, or any other thin, acid, opening liquor.

Besides bleeding and plentiful dilution, it will be necessary to foment the belly with cloths dipped in warm water, and if this should not succeed, the patient must be immersed up to the breast in warm water.

In the bilious colic the vomiting is often very difficult to restrain. When this happens, the patient may drink a decoction of toasted bread, or an infusion of garden-mint in boiling water. Should these not have the desired effect, the saline draught, with a few drops of laudanum in it, may be given and repeated according to the urgency of the symptoms. A small quantity of Venice treacle may be spread in form of a cataplasm, and applied to the pit of the stomach. Clysters, with a proper quantity of Venice treacle, or liquid laudanum in them, may likewise be frequently administered.

The *hysteric* colic bears a great resemblance to the bilious. It is attended with acute pains about the region of the stomach, vomiting, &c. What the patient vomits in this case is commonly of a greenish colour. There is a great sinking of the spirits, with dejection of mind and difficulty of breathing, which are the characteristic symptoms of this disorder. Sometimes it is accompanied with the jaundice, but this generally goes off of its own accord in a few days.

In this colic all evacuations, as bleeding, purging, vomiting, &c. do hurt. Every thing that weakens the patient, or sinks the spirits, is to be avoided. If, however, the vomiting should prove violent, lukewarm water, or small posset, may be drank to cleanse the stomach. Afterwards the patient may take fifteen, twenty, or twenty-five drops of liquid laudanum in a glass of cinnamon-water. This may be repeated every ten or twelve hours, till the symptoms abate.

The patient may likewise take four or five of the fœtid

pills every six hours, and drink a cup of penny-royal tea after them. If assafœtida should prove disagreeable, which is sometimes the case, a tea-spoonful of the tincture of castor in a cup of penny-royal tea, or thirty or forty drops of the balsam of Peru dropped upon a bit of loaf-sugar, may be taken in its stead. The anti-hysteric plaster may also be used, which has often a good effect.

The *nervous* colic prevails among miners, smelters of lead, plumbers, the manufacturers of white lead, &c. It is very common in the cyder counties of England, and is supposed to be occasioned by the leaden vessels used in preparing that liquor. It is likewise a frequent disease in the West Indies, where it is termed the dry belly-ache.

No disease of the bowels is attended with more excruciating pain than this. Nor is it soon at an end. I have known it continue eight or ten days with very little intermission, the body all the while continuing bound in spite of medicine, yet at length yield, and the patient recover.* It generally, however, leaves the patient weak, and often ends in a palsy.

The general treatment of this disease is so nearly the same with that of the iliac passion, or inflammation of the bowels, that we shall not insist upon it. The body is to be opened by mild purgatives given in small doses, and frequently repeated, and their operation must be assisted by soft oily clysters, fomentations, &c. The castor oil is reckoned peculiarly proper in this disease. It may both be mixed with the clysters, and given by the mouth.†

The Barbadoes tar is said to be an efficacious medicine in this complaint. It may be taken to the quantity of two drams three times a-day, or oftener if the stomach will bear it. This tar, mixed with an equal quantity of strong rum, is likewise proper for rubbing the spine, in case any tingling, or other symptoms of the palsy, are felt. When the tar cannot be obtained, the back may be rubbed with strong spirits, or a little oil of nutmegs, or of rosemary.

* As the smoke of tobacco thrown into the bowels will often procure a stool when all other means have failed, an apparatus for this purpose ought to be kept by every surgeon. It may be purchased at a small expense, and will be of service in several other cases, as the recovery of drowned persons, &c.

† The dose is from one table-spoonful to two or three, if necessary, to open the body.

If the patient remain weak and languid after this disease, he must take exercise on horseback, and use an infusion of the Peruvian bark in wine. When the disease ends in a palsy, the Bath waters are found to be extremely proper.

To avoid this kind of colic, people must shun all sour fruits, acids, and austere liquors, &c. Those who work in lead ought never to go to their business fasting, and their food should be oily or fat. They may take a glass of salad oil with a little brandy or rum, every morning, but should never take spirits alone. Liquid aliment is best for them, as fat broths, &c.; but low living is bad. They should frequently go a little out of the tainted air; and should never suffer themselves to be costive. In the West Indies, and on the coast of Guinea, it has been found of great use, for preventing this colic, to wear a piece of flannel round the waist, and to drink an infusion of ginger by way of tea.

Sundry other kinds of this disease might be mentioned, but too many distinctions would tend only to perplex the reader. Those already mentioned are the most material, and should indeed be attended to, as their treatment is very different. But even persons who are not in a condition to distinguish very accurately in these matters, may nevertheless be of great service to patients in colics of every kind, by only observing the following general rules, viz. To bathe the feet and legs in warm water; to apply bladders filled with warm water, or cloths wrung out of it, to the stomach and bowels; to make the patient drink freely of diluting mucilaginous liquors; and to give him an emollient clyster every two or three hours. Should these not succeed, the patient ought to be immersed in warm water.

INFLAMMATION OF THE KIDNEYS.

Causes.—This disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasioned by wounds or bruises of the kidneys; small stones or gravel lodging within them; by strong diuretic medicines; as spirits of turpentine, tincture of cantharides, &c. Violent motion, as hard riding or walking, especially in hot weather, or whatever drives the blood too forcibly into the kidneys, may occasion this malady. It may likewise proceed from lying too soft, too much on the

back, involuntary contractions, or spasms, in the urinary vessels.

Symptoms.—There is a sharp pain about the region of the kidneys, with some degree of fever, and a stupor or dull pain in the thigh of the affected side. The urine is at first clear, and afterwards of a reddish colour; but in the worst kind of the disease it generally continues pale, is passed with difficulty, and commonly in small quantities at a time. The patient feels great uneasiness when he endeavours to walk or sit upright. He lies with most ease on the affected side, and has generally a nausea or vomiting, resembling that which happens in the colic.

This disease, however, may be distinguished from the colic by the pain being seated farther back, and by the difficulty of passing urine, with which it is constantly attended.

Regimen.—Every thing of a heating or stimulating nature is to be avoided. The food must be thin and light; as panado, small broths, with mild vegetables, and the like. Emollient and thin liquors must be plentifully drank: as clear whey, or balm-tea sweetened with honey, decoctions of marsh-mallow roots, with barley and liquorice, &c. The patient, notwithstanding the vomiting, must constantly keep sipping small quantities of these or other diluting liquors. Nothing so safely and certainly abates the inflammation, and expels the obstructing cause, as copious dilution. The patient must be kept easy, quiet, and free from cold, as long as any symptoms of inflammation remain.

Medicine.—Bleeding is generally necessary, especially at the beginning. Ten or twelve ounces may be let from the arm or foot with a lancet; and if the pain and inflammation continue, the operation may be repeated in twenty-four hours, especially if the patient be of a full habit. Leeches may likewise be applied to the hæmorrhoidal veins, as a discharge from these will greatly relieve the patient.

Clothes dipped in warm water, or bladders filled with it, must be applied as near as possible to the part affected, and renewed as they grow cool. If the bladders be filled with a decoction of mallows and camomile-flowers, to which a little saffron is added, and mixed with about a third part of new milk, it will be still more beneficial.

Emollient clysters ought frequently to be administered;

and if these do not open the body, a little salt and honey or manna may be added to them.

The same course is to be followed where gravel or a stone is lodged in the kidney, but when the gravel or stone is separated from the kidney, and lodges in the ureter,* it will be proper, besides the fomentations, to rub the small of the back with sweet oil, and to give gentle diuretics; as juniper-water sweetened with the syrup of marsh-mallows; a tea-spoonful of the sweet spirits of nitre, with a few drops of laudanum, may now and then be put in a cup of the patient's drink. He ought likewise to take exercise on horse-back, or in a carriage, if he be able to bear it.

When the disease is protracted beyond the seventh or eighth day, and the patient complains of a stupor and heaviness of the part, has frequent returns of chilliness, shivering, &c. there is reason to suspect that matter is forming in the kidney, and that an abscess will ensue.

When matter in the urine shews that an ulcer is already formed in the kidney, the patient must be careful to abstain from all acrid, sour, and salted provisions; and to live chiefly upon mild mucilaginous herbs and fruits, together with the broth of young animals, made with barley and common pot-herbs, &c. His drink may be whey, and butter-milk that is not sour. The latter is by some reckoned a specific remedy in ulcers of the kidneys. To answer this character, however, it must be drank for a considerable time. Chalybeate waters have likewise been found beneficial in this disease. This medicine is easily obtained, as it is found in every part of Great Britain. It must likewise be used for a considerable time, in order to produce any salutary effect.

Those who are liable to frequent returns of inflammation, or obstructions of the kidneys, must abstain from wines, especially such as abound with tartar; and their food ought to be light and easy of digestion. They should use moderate exercise, not lie too hot, nor too much on their back, and avoid costiveness.

* The Ureters are two long and slender canals, one on each side, which carry the urine from the bason of the kidneys to the bladder. They are sometimes obstructed by small pieces of gravel falling down from the kidneys, and lodging in them.

INFLAMMATION OF THE BLADDER.

The inflammation of the bladder proceeds, in a great measure, from the same causes as that of the kidneys. It is known by an acute pain towards the bottom of the belly, and difficulty of passing urine, with some degree of fever, a constant inclination to go to stool, and a perpetual desire to make water.

This disease must be treated on the same principles as the one immediately preceding. The diet must be light and thin, and the drink of a cooling nature. Bleeding is very proper at the beginning, and in robust constitutions it will often be necessary to repeat it. The lower part of the belly should be fomented with warm water, or a decoction of mild vegetables; and emollient clysters ought frequently to be administered, &c.

The patient should abstain from every thing that is of a hot, acrid, and stimulating quality; and should live entirely upon small broths, gruels, or mild vegetables.

A stoppage of urine may proceed from other causes besides an inflammation of the bladder; as a swelling of the hæmorrhoidal veins; hard *fæces* lodged in the *rectum;* a stone in the bladder; excrescences in the urinary passages, a palsy of the bladder, hysteric affections, &c. Each of these requires a particular treatment, which does not fall under our present consideration. We shall only observe, that in all of them mild and gentle applications are the safest, as strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes into the urinary passages, to remove, as they thought, somewhat that obstructed the discharge of urine, and others bring on a violent inflammation of the bladder, by using strong diuretics, as oil of turpentine, &c. for that purpose.

INFLAMMATION OF THE LIVER.

The liver is less subject to inflammation than most of the other viscera, as in it the circulation is slower; but when an inflammation does happen, it is with difficulty removed, and often ends in a suppuration or schirrus.

Causes.—Beside the common causes of inflammation, we may here reckon the following, *viz.* excessive fatness, a schirrus of the liver itself, violent shocks from strong vomits when the liver was before unsound, an adust or atrabilarian state of the blood, any thing that suddenly cools the liver after it has been greatly heated, stones obstructing the course of the bile, drinking strong wines and spirituous liquors, using hot spicy aliment, obstinate hypochondriacal affections, &c.

Symptoms.—This disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight, or fulness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish colour of the skin and eyes.

The *symptoms* here are various, according to the degree of inflammation, and likewise according to the particular part of the liver where the inflammation happens. Sometimes the pain is so inconsiderable, that an inflammation is not so much as suspected ; but when it happens in the upper or convex part of the liver, the pain is more acute, the pulse quicker, and the patient is often troubled with a dry cough, a hiccup, and a pain extending to the shoulder, with difficulty of lying on the left side, &c.

This disease may be distinguished from the pleurisy, by the pain being less violent, seated under the false ribs, the pulse not so hard, and by the difficulty of lying on the left side. It may be distinguished from the hysteric and hypochondriac disorders, by the degree of fever with which it is always attended.

This disease, if properly treated, is seldom mortal. A constant hiccuping, violent fever, and excessive thirst, are bad symptoms. If it ends in a suppuration, and the matter cannot be discharged outwardly, the danger is great. When a schirrus of the liver ensues, the patient, if he observes a proper regimen, may nevertheless live a number of years tolerably easy ; but if he indulge in animal food and strong liquors, or take medicines of an acrid or irritating nature, the schirrus will be converted into a cancer, which must infallibly prove fatal.

Regimen.—The same regimen is to be observed in this as in other inflammatory disorders. All hot things are to be carefully avoided, and cool diluting liquors, as whey, barley-

water, &c. drank freely. The food must be light and thin, and the body, as well as the mind, kept easy and quiet.

MEDICINE.—Bleeding is proper at the beginning of this disease, and it will often be necessary, even though the pulse should not feel hard, to repeat it. All violent purgatives are to be avoided; the body, however, must be kept gently open. A decoction of tamarinds, with a little honey, or manna, will answer this purpose very well. The side affected must be fomented in the manner directed in the foregoing diseases. Mild laxative clysters should be frequently administered; and if the pain should notwithstanding continue violent, a blistering-plaster may be applied over the part affected; or rather, a plaster made of gum ammoniac and vinegar of squills.

Medicines which promote the secretion of urine have a very good effect here. For this purpose half a dram of purified nitre, or a tea-spoonful of the sweet spirits of nitre, may be taken in a cup of the patient's drink three or four times a-day.

When there is an inclination to sweat, it ought to be promoted, but not by warm sudorifics. The only thing to be used for that purpose is plenty of diluting liquor drank about the warmth of the human blood. Indeed the patient in this case, as well as in all other topical inflammations, ought to drink nothing that is colder than the blood.

If the stools should be loose, and even streaked with blood, no means must be used to stop them, unless they be so frequent as to weaken the patient. Loose stools often prove critical, and carry off the disease.

If an abscess or imposthume is formed in the liver, all methods should be tried to make it break and discharge itself outwardly, as fomentations, the application of poultices, ripening cataplasms, &c. Sometimes indeed the matter of an abscess comes away in the urine, and sometimes it is discharged by stool; but these are efforts of Nature which no means can promote. When the abscess bursts into the cavity of the *abdomen* at large, death must ensue; nor will the event be more favourable when the abscess is opened by an incision, unless in cases where the liver adheres to the *peritonæum*, so as to form a bag for the matter, and prevent it from falling into the cavity of the *abdomen*; in which

case, opening the abscess by a sufficiently large incision will probably save the patient's life.*

If the disorder, in spite of all endeavours to the contrary, should end in a schirrus, the patient must be careful to regulate his diet, &c. in such a manner as not to aggravate the disease. He must not indulge in flesh, fish, strong liquors, or any highly seasoned or salted provisions: but should for the most part live on mild vegetables, as fruits, and roots, taking gentle exercise, and drinking whey, barley-water, or butter-milk. If he takes any thing stronger, it should be fine mild ale, which is less heating than wines or spirits.

We shall take no notice of inflammations of the other viscera. They must in general be treated upon the same principles as those already mentioned. The chief rule with respect to all of them is, to let blood, to avoid every thing that is strong, or of a heating nature, to apply warm fomentations to the part affected, and to cause the patient to drink a sufficient quantity of warm diluting liquors.

Warm fomentations, frequently repeated, are the best means of relief for the diseases here treated of. If the fomentations are not effectual, the warm bath must be resorted to, in which the patient ought to remain as long as his strength will permit. To supply the want of a proper bath, a cask, or tub, may be used.

The costiveness accompanying inflammation of the stomach and bowels, often requires great skill and perseverance for its removal. A very mild medicine will sometimes succeed where a powerful one has failed. Different medicines should be tried and persisted in till the effect be produced, and even external applications may sometimes be administered with effect when the best internal remedies have been used in vain.

* I know a gentleman who has had several abscesses of the liver opened, and is now a strong and healthy man, though above eighty years of age.

CHAP. XXXI.

OF THE CHOLERA MORBUS, AND OTHER EXCESSIVE DISCHARGES FROM THE STOMACH AND BOWELS.

THE *cholera morbus* is a violent purging and vomiting, attended with gripes, sickness, and a constant desire to go to stool. It comes on suddenly, and is most common in autumn. There is hardly any disease that kills more quickly than this, when proper means are not used in due time for removing it.

CAUSES.—It is occasioned by a redundancy and putrid acrimony of the bile; cold; food that easily turns rancid or sour on the stomach; as butter, bacon, sweetmeats, cucumbers, melons, cherries, and other cold fruits.* It is sometimes the effect of strong acrid purges or vomits; or of poisonous substances taken into the stomach. It may likewise proceed from violent passions or affections of the mind; as fear, anger, &c.

SYMPTOMS.—It is generally preceded by a *cardialgia*, or heart-burn, sour belchings, and flatulencies, with pain of the stomach and intestines. To these succeed excessive vomiting, and purging of green, yellow, or blackish-coloured bile, with a distension of the stomach, and violent griping pains. There is likewise a great thirst, with a very quick unequal pulse, and often a fixed acute pain about the region of the navel. As the disease advances, the pulse often sinks so low as to become quite imperceptible, the extremities grow cold, or cramped, and are often covered with a clammy sweat; the urine is obstructed, and there is a palpitation of the heart. Violent hiccuping, fainting, and convulsions, are the signs of approaching death.

MEDICINE.—At the beginning of this disease, the efforts of Nature to expel the offending cause should be assisted by promoting the purging and vomiting. For this purpose, the patient must drink freely of diluting liquors; as whey, butter-milk, warm water, thin water-gruel, small posset, or what is perhaps preferable to any of them, very weak

* I have been twice brought to the gates of death by this disease, and both times it was occasioned by eating rancid bacon.

chicken-broth. This should not only be drank plentifully to promote the vomiting, but a clyster of it given every hour in order to promote the purging.

After these evacuations have been continued for some time, a decoction of toasted oat-bread may be drank to stop the vomiting. The bread should be toasted till it is of a brown colour, and afterwards boiled in spring-water. If oat-bread cannot be had, wheat-bread, or oat-meal well toasted, may be used in its stead. If this does not put a stop to the vomiting, two table-spoonfuls of the saline julep, with ten drops of laudanum, may be taken every hour till it ceases.

The vomiting and purging, however, ought never to be stopped too soon. As long as these discharges do not weaken the patient they are salutary, and may be allowed to go on, or rather ought to be promoted. But when the patient is weakened by the evacuations, which may be known from the sinking of his pulse, &c. recourse must immediately be had to opiates, as recommended above; to which may be added strong wines, with spirituous cinnamon-waters, and other generous cordials. Warm negus, or strong wine-whey, will likewise be necessary to support the patient's spirits, and promote the perspiration. His legs should be bathed in warm water, and afterwards rubbed with flannel cloths, or wrapped in warm blankets, and warm bricks applied to the soles of his feet. Flannels wrung out of warm spirituous fomentations should likewise be applied to the region of the stomach.

When the violence of the disease is over, to prevent a relapse, it will be necessary for some time to continue the use of small doses of laudanum. Ten or twelve drops may be taken in a glass of wine, at least twice a-day, for eight or ten days. The patient's food ought to be nourishing, but taken in small quantities, and he should use moderate exercise. As the stomach and intestines are generally much weakened, an infusion of the bark, or other bitter, in small wine, sharpened with the elixir of vitriol, may be drank for some time.

Though physicians are seldom called in due time in this disease, they ought not to despair of relieving the patient even in the most desperate circumstances. Of this I lately saw a very striking proof in an old man and his son, who had been both seized with it about the middle of the night.

I did not see them till next morning, when they had much more the appearance of dead than of living men. No pulse could be felt; the extremities were cold and rigid, the countenance was ghastly, and the strength almost quite exhausted. Yet from this deplorable condition they were both recovered by the use of opiates and cordial medicines.

OF A DIARRHŒA, OR LOOSENESS.

A looseness, in many cases, is not to be considered as a disease, but rather as a salutary evacuation. It ought therefore never to be stopped, unless when it continues too long, or evidently weakens the patient. As this, however, sometimes happens, we shall point out the most common causes of a looseness, with the proper method of treatment.

When a looseness is occasioned by catching cold, or an obstructed perspiration, the patient ought to keep warm, to drink freely of weak diluting liquors, to bathe his feet and legs frequently in lukewarm water, to wear flannel next his skin, and to take every other method to restore the perspiration.

In a looseness which proceeds from excess or repletion, a vomit is the proper medicine. Vomits not only cleanse the stomach, but promote all the secretions, which renders them of great importance in carrying off a debauch. Half a dram of ipecacuanha in powder will answer this purpose very well. A day or two after the vomit, the same quantity of rhubarb may be taken, and repeated two or three times, if the looseness continues. The patient ought to live upon light vegetable food of easy digestion, and to drink whey, thin gruel, or barley-water.

A looseness occasioned by the obstruction of any customary evacuation, generally requires bleeding. If that does not succeed, other evacuations may be substituted in the room of those which are obstructed. At the same time, every method is to be taken to restore the usual discharges, as not only the cure of the disease, but the patient's life, may depend on this.

A periodical looseness ought never to be stopped. It is always an effort of Nature to carry off some offending matter, which, if retained in the body, might have fatal effects. Children are very liable to this kind of looseness, especially while teething. It is, however, so far from being hurtful to

them, that such children generally get their teeth with least trouble. If these loose stools should at any time prove sour or griping, a tea-spoonful of magnesia alba, with four or five grains of rhubarb, may be given to the child in a little panado, or any other food. This, if repeated three or four times, will generally correct the acidity, and carry off the griping stools. The potio cretacea, or chalk julep, may be administered in doses of two or three spoonfuls after each evacuation; or a tea-spoonful of fine powdered chalk may be mixed in a tea-cupful of water-gruel, and given occasionally.

A diarrhœa, or looseness, which proceeds from violent passions or affections of the mind, must be treated with the greatest caution. Vomits in this case are highly improper. Nor are purges safe, unless they be very mild, and given in small quantities. Opiates, and other antispasmodic medicines, are most proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or penny-royal tea every eight or ten hours, till the symptoms abate. Ease, cheerfulness, and tranquillity of mind, are here of the greatest importance.

When a looseness proceeds from acrid or poisonous substances taken into the stomach, the patient must drink large quantities of diluting liquors, with oil or fat broths, to promote vomiting and purging. Afterwards, if there be reason to suspect that the bowels are inflamed, bleeding will be necessary. Small doses of laudanum may likewise be taken to remove their irritation.

When the gout, repelled from the extremities, occasions a looseness, it ought to be promoted by gentle doses of rhubarb, or other mild purgatives. The gouty matter is likewise to be solicited towards the extremities by warm fomentations, cataplasms, &c. The perspiration ought at the same time to be promoted by warm diluting liquors; as wine-whey with spirits of hartshorn, or a few drops of liquid laudanum in it.

When a looseness proceeds from worms, which may be known from the sliminess of the stools, mixed with pieces of decayed worms, &c. medicines must be given to kill and carry off these vermin, as the powder of tin with purges of rhubarb and calomel. Afterwards lime-water, either alone, or with a small quantity of rhubarb infused, will be proper

to strengthen the bowels, and prevent the new generation of worms.

A looseness is often occasioned by drinking bad water. When this is the case, the disease generally proves epidemical. When there is reason to believe that this or any other disease proceeds from the use of unwholesome water, it ought immediately to be changed; or if that cannot be done, it may be corrected by mixing it with quicklime, chalk, or the like.

In people whose stomachs are weak, violent exercise immediately after eating will occasion a looseness. Though the cure of this is obvious, yet it will be proper, besides avoiding violent exercise, to use such medicines as tend to brace and strengthen the stomach, as infusions of the bark, with other bitter and astringent ingredients, in white-wine. Such persons ought likewise to take frequently a glass or two of old red port, or good claret.

From whatever cause a looseness proceeds, when it is found necessary to check it, the diet ought to consist of rice boiled with milk, and flavoured with cinnamon; rice-jelly, sago with red port, and the lighter sort of flesh meat roasted. The drink may be thin water-gruel, rice-water, or weak broth made from lean veal, or with a sheep's head, as being more gelatinous than mutton, beef, or chicken-broth.

Persons who, from a peculiar weakness, or too great an irritability of the bowels, are liable to frequent returns of this disease, should live temperately, avoiding crude summer fruits, all unwholesome foods, and meats of hard digestion. They ought likewise to beware of cold, moisture, or whatever may obstruct the perspiration, and should wear flannel next the skin. All violent passions, as fear, anger, &c. are likewise carefully to be guarded against.

OF VOMITING.

Vomiting may proceed from various causes; as excess in eating and drinking; foulness of the stomach; the acrimony of the aliments; a translation of the morbific matter of ulcers, of the gout, the erysipelas, or other diseases, to the stomach. It may likewise proceed from a looseness having been too suddenly stopped; from the stoppage of any customary evacuation, as the bleeding piles, the *menses*,

&c. from a weakness of the stomach, the colic, the iliac passion, a rupture, a fit of the gravel, worms; or from any kind of poison taken into the stomach. It is a usual symptom of injuries done to the brain; as contusions, compressions, &c. It is likewise a symptom of wounds or inflammations of the diaphragm, intestines, spleen, liver, kidneys, &c.

Vomiting may be occasioned by unusual motions, as sailing, being drawn backwards in a carriage, &c. It may likewise be excited by violent passions, or by the idea of nauseous or disagreeable objects, especially of such things as have formerly produced vomiting. Sometimes it proceeds from a regurgitation of the bile into the stomach; in this case, what the patient vomits is generally of a yellow or greenish colour, and has a bitter taste. Persons who are subject to nervous affections are often suddenly seized with violent fits of vomiting. Lastly, vomiting is a common symptom of pregnancy. In this case it generally comes on about two weeks after the stoppage of the *menses*, and continues during the first three or four months.

When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought therefore to be promoted, by drinking lukewarm water, or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile-tea.

When the retrocession of the gout, or the obstruction of customary evacuations, occasion vomiting, all means must be used to restore these discharges; or, if that cannot be effected, their place must be supplied by others, as bleeding, purging, bathing the extremities in warm water, opening issues, setons, perpetual blisters, &c.

When vomiting is the effect of pregnancy, it may generally be mitigated by bleeding, and keeping the body gently open. The bleeding, however, ought to be in small quantities at a time, and the purgatives should be of the mildest kind, as figs, stewed prunes, manna, or senna. Pregnant women are most apt to vomit in the morning immediately after getting out of bed, which is owing partly to the change of posture, but more to the emptiness of the stomach. It may generally be prevented, by taking a dish of coffee, tea, or some light breakfast, in bed. Pregnant

women who are afflicted with vomiting, ought to be kept easy both in body and mind. They should neither allow their stomachs to be quite empty, nor should they eat much at once. Cold water is a very proper drink in this case; if the stomach be weak, a little brandy may be added to it. If the spirits be low, and the person apt to faint, a spoonful of cinnamon-water, with a little marmalade of quinces or oranges, may be taken.

If vomiting proceeds from weakness of the stomach, bitters will be of service. Peruvian bark infused in wine or brandy, with as much rhubarb as will keep the body gently open, is an excellent medicine in this case. The elixir of vitriol is also a good medicine. It may be taken in the dose of fifteen or twenty drops, twice or thrice a-day, in a glass of wine or water. Habitual vomitings are sometimes alleviated by making oysters a principal part of diet.

A vomiting which proceeds from acidities in the stomach, is relieved by alkaline purges. The best medicine of this kind is the magnesia alba, a tea spoonful of which may be taken in a dish of tea, or a little milk, three or four times a-day, or oftener if necessary, to keep the body open.

When vomiting proceeds from violent passions or affections of the mind, all evacuants must be carefully avoided, especially vomits. These are exceedingly dangerous. The patient in this case ought to be kept perfectly easy and quiet, to have the mind soothed, and to take some gentle cordial, as negus, or a little brandy and water, to which a few drops of laudanum may occasionally be added.

When vomiting proceeds from spasmodic affections of the stomach, musk, castor, and other antispasmodic medicines, are of use. Warm and aromatic plasters have likewise a good effect. The stomach plaster of the London or Edinburgh dispensatory may be applied to the pit of the stomach, or a plaster of *theriaca*, which will answer rather better. Aromatic medicines may likewise be taken inwardly, as cinnamon or mint-tea, wine with spiceries boiled in it, &c. The region of the stomach may be rubbed with æther, or if that cannot be had, with strong brandy, or other spirits. The belly should be fomented with warm water, or the patient immersed up to the breast in a warm bath.

I have always found the saline draughts taken in the act of effervescence, of singular use in stopping a vomiting,

from whatever cause it proceeded. These may be prepared by dissolving a dram of the salt of tartar in an ounce and a half of fresh lemon-juice, and adding to it an ounce of peppermint-water, the same quantity of simple cinnamon-water, and a little white sugar. This draught must be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent. A violent vomiting has sometimes been stopped by cupping on the region of the stomach, after all other means had failed.

As the least motion will often bring on the vomiting again, even after it has been stopped, the patient must avoid all manner of action. The diet must be so regulated as to sit easy upon the stomach, and nothing should be taken that is hard of digestion. We do not, however, mean that the patient should live entirely upon slops. Solid food, in this case, often sits easier on the stomach than liquids.

CHAP. XXXII.

OF THE DIABETES, AND OTHER DISORDERS OF THE KIDNEYS AND BLADDER.

The diabetes is a frequent and excessive discharge of urine. It is seldom to be met with among young people; but often attacks persons in the decline of life, especially those who follow the more violent employments, or have been hard drinkers in their youth.

Causes.—A diabetes is often the consequence of acute diseases, as fevers, fluxes, &c. where the patient has suffered by excessive evacuations; it may also be occasioned by great fatigue, as riding long journies upon a hard-trotting horse, carrying heavy burdens, running, &c. It may be brought on by hard drinking, or the use of strong stimulant diuretic medicines, as tincture of cantharides spirits of turpentine, and such like. It is often the effect of drinking too great quantities of mineral water. Many imagine that these will do them no service unless they be drank in great quantities, by which mistake it often happens that they occasion worse diseases than those they were intended to cure. In a word, this disease may either proceed from too

great a laxity of the organs which secrete the urine, from something that stimulates the kidneys too much, or from a thin dissolved state of the blood, which makes too great a quantity of it run off by the urinary passages.

Symptoms.—In a diabetes, the urine generally exceeds in quantity all the liquid food which the patient takes. It is thin and pale, of a sweetish taste, and agreeable smell. The patient has a continual thirst, with some degree of fever; his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away, till the patient is reduced to skin and bone. There is a heat of the bowels; and frequently the loins, testicles, and feet, are swelled.

This disease may generally be cured at the beginning; but after it has continued long, the cure becomes very difficult. In drunkards, and very old people, a perfect cure is not to be expected.

Regimen.—Every thing that stimulates the urinary passages, or tends to relax the habit, must be avoided. For this reason, the patient should live chiefly on solid food. His thirst may be quenched with acids; as sorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, sago, and salop, with milk, are the most proper food. Of animal substances, shell-fish are to be preferred; as oysters, crabs, &c.

The drink may be Bristol-water. When that cannot be obtained, lime-water, in which a due proportion of oak-bark has been macerated, may be used. The white decoction, with isinglass dissolved in it, is likewise a very proper drink.

The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or mattress. Nothing hurts the kidneys more than lying too soft. A warm dry air, the use of the flesh brush, and every thing that promotes perspiration, is of service. For this reason, the patient ought to wear flannel next his skin. A large strengthening-plaster may be applied to the back; or, what will answer better, a great part of the body may be wrapped in plaster.

Medicine.—Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb, with cardamum-seeds, or any other

spiceries, infused in wine, and may be taken in such quantities as to keep the body gently open.

The patient must next have recourse to astringents and corroborants. Half a dram of powder made of equal parts of alum and the inspissated juice, commonly called *Terra Japonica*, may be taken four times a-day, or oftener if the stomach will bear it. The alum must first be melted in a crucible; afterwards they may be both pounded together. Along with every dose of this powder, the patient may take a tea-cupful of the tincture of roses.

If the patient's stomach cannot bear the alum in substance, whey may be made of it, and taken in the dose of a tea-cupful three or four times a-day. The alum-whey is prepared by boiling two English quarts of milk over a slow fire, with three drams of alum, till the curd separates.

Opiates are of service in this disease, even though the patient rests well. They take off spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink three or four times a-day.

The best corroborants which we know, are the Peruvian bark and wine. A dram of bark may be taken in a glass of red port or claret, three times a-day. The medicine will be both more efficacious and less disagreeable, if fifteen or twenty drops of the acid elixir of vitriol be added to each dose. Such as cannot take the bark in substance may use the decoction, mixed with an equal quantity of red wine, and sharpened as above.

There is a disease incident to labouring people in the decline of life, called *an Incontinency of Urine*. But this is very different from a diabetes, as the water passes off involuntarily by drops, and does not exceed the usual quantity. This disease is rather troublesome than dangerous. It is owing to a relaxation of the sphincter of the bladder, and is often the effect of a palsy. Sometimes it proceeds from hurts, or injuries occasioned by blows, bruises, preternatural labours, &c. Sometimes it is the effect of a fever. It may likewise be occasioned by a long use of strong diuretics, or of stimulating medicines injected into the bladder.

This disease may be mitigated by the use of astringent and corroborating medicines, such as have been mentioned above; but we do not remember ever to have seen it cured.

In an incontinency of urine, from whatever cause, a piece of sponge ought to be worn, or a bladder applied in such a manner as to prevent the urine from galling and excoriating the parts.

OF A SUPPRESSION OF URINE.

It has already been observed, that a suppression of urine may proceed from various causes; as an inflammation of the kidneys, or bladder; small stones or gravel lodging in the urinary passages, hard *fæces* lying in the *rectum*, pregnancy, a spasm or contraction of the neck of the bladder, clotted blood in the bladder itself, a swelling of the hæmorrhoidal veins, &c.

Some of these cases require the catheter, both to remove the obstructing matter, and to draw off the urine; but as this instrument can only be managed with safety by persons skilled in surgery, we shall say nothing further of its use. A bougee may be used by any cautious hand, and will often succeed better than the catheter.

We would chiefly recommend, in all obstructions of urine, fomentations and evacuants. Bleeding, as far as the patient's strength will permit, is necessary, especially where there are symptoms of topical inflammation. Bleeding in this case not only abates the fever, by lessening the force of the circulation, but, by relaxing the solids, it takes off the spasm or stricture upon the vessels, which occasioned the obstruction.

After bleeding, fomentations must be used. These may either consist of warm water alone, or of decoctions of mild vegetables; as mallows, camomile-flowers, &c. Cloths dipped in these may either be applied to the part affected, or a large bladder filled with the decoction may be kept continually upon it. Some put the herbs themselves into a flannel bag, and apply them to the part, which is far from being a bad method. These continue longer warm than cloths dipped in the decoction, and at the same time keep the part equally moist.

In all obstructions of urine, the body ought to be kept open. This is not, however, to be attempted by strong purgatives, but by emollient clysters, or gentle infusions of senna and manna. Clysters in this case not only open the

body, but answer the purpose of an internal fomentation, and greatly assist in removing the spasms of the bladder and parts adjacent.

The food must be light, and taken in small quantities. The drink may be weak broth, or decoctions and infusions of mucilaginous vegetables, as marsh-mallow roots, lime-tree buds, &c. A tea-spoonful of the sweet spirits of nitre, or a dram of Castile soap, may be frequently put into the patient's drink; and, if there be no inflammation, he may drink small gin-punch.

Persons subject to a suppression of urine ought to live very temperate. Their diet should be light, and their liquor diluting. They should avoid all acid and austere wines, should take sufficient exercise, lie hard, and avoid study and sedentary occupations.

OF THE GRAVEL AND STONE.

When small stones are lodged in the kidneys, or discharged along with the urine, the patient is said to be afflicted with the gravel. If one of these stones happen to make a lodgement in the bladder for some time, it accumulates fresh matter, and at length becomes too large to pass off with the urine. In this case the patient is said to have the stone.

Causes.—The stone and gravel may be occasioned by high living; the use of strong astringent wines; a sedentary life; lying too hot, soft, or too much on the back; the constant use of water impregnated with earthy or stony particles; aliments of an astringent or windy nature, &c. It may likewise proceed from an hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatism, are most liable to it.

Symptoms.—Small stones or gravel in the kidneys occasion pain in the loins, sickness, vomiting, and sometimes bloody urine. When the stone descends into the *ureter*, and is too large to pass along with ease, all the above symptoms are increased; the pain extends towards the bladder; the thigh and leg of the affected side are benumbed; the testicles are drawn upwards, and the urine is obstructed.

A stone in the bladder is known from a pain at the time, as well as before and after making water; from the urine

coming away by drops, or stopping suddenly when it was running in a full stream; by a violent pain in the neck of the bladder upon motion, especially on horseback, or in a carriage on a rough road; or from a white, thick, copious stinking mucous sediment in the urine; from an itching in the top of the *penis*; from bloody urine; from an inclination to go to stool during the discharge of urine; from the patient's passing his urine more easily when lying than in an erect posture; from a kind of convulsive motion occasioned by the sharp pain in discharging the last drops of the urine; and lastly, from sounding or searching with the catheter.

Regimen.—Persons afflicted with the gravel or stone should avoid aliments of a windy or heating nature, as salt meats, sour fruits, &c. Their diet ought chiefly to consist of such things as tend to promote the secretion of urine, and to keep the body open. Artichokes, asparagus, spinage, lettuce, parsley, succory, purslane, turnips, potatoes, carrots, and radishes, may be safely eaten. Onions, leeks, and cellery, are, in this case, reckoned medicinal. The most proper drinks are whey, butter-milk, milk and water, barley-water; decoctions or infusions of the roots of marshmallows, parsley, liquorice, or of other mild mucilaginous vegetables, as linseed, lime-tree buds or leaves, &c. If the patient has been accustomed to generous liquors, he may drink gin and water not too strong.

Gentle exercise is proper; but violent motion is apt to occasion bloody urine. We would therefore advise that it should be taken in moderation. Persons afflicted with the gravel often pass a great number of stones after riding on horseback, or in a carriage; but those who have a stone in the bladder are seldom able to bear these kinds of exercise. Where there is a hereditary tendency to this disease, a sedentary life ought never to be indulged. Were people careful, upon the first symptoms of gravel, to observe a proper regimen of diet, and to take sufficient exercise, it might often be carried off, or at least prevented from increasing; but if the same course which occasioned the disease is persisted in, it must be aggravated.

Medicine.—In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the *ureter*, or some part of the urinary passages, the patient must be bled; warm fomentations should likewise be applied to the part

affected, emollient clysters administered and diluting mucilaginous liquors drank, &c. The treatment of this case has been fully pointed out under the articles *inflammation of the kidneys and bladder*, to which we refer.

Dr Whyte advises patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle-shell lime water. The Doctor very justly observes, that though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth.

When a stone is formed in the bladder, the Doctor recommends Spanish soap, and oyster or cockle-shell lime-water, to be taken in the following manner: The patient must swallow every day, in any form that is least disagreeable, an ounce of the internal part of Alicant soap, and drink three or four English pints of oyster or cockle-shell lime-water: the soap is to be divided into three doses; the largest is to be taken fasting in the morning early, the second at noon, and the third at seven in the evening; drinking above each dose a large draught of the lime-water; the remainder of which he may take any time betwixt dinner and supper, instead of other liquors.

The patient should begin with a smaller quantity of the lime-water and soap than that mentioned above; at first an English pint of the former, and three drams of the latter, may be taken daily. This quantity, however, he may increase by degrees, and ought to persevere in the use of these medicines, especially if he finds any abatement of his complaints, for several months; nay if the stone be very large, for years. It may likewise be proper for the patient, if he be severely pained, not only to begin with the soap and lime-water in small quantities, but to take the second or third lime-water instead of the first. However, after he has been for some time accustomed to these medicines, he may not only take the first water, but if he finds he can easily bear it, heighten its dissolving power still more by pouring it a second time on fresh calcined shells.

The caustic alkali, or soap-lees, is the medicine chiefly in vogue at present for the stone. It is of a very acrid nature, and ought therefore to be given in some gelatinous or

mucilaginous liquor; as veal-broth, new milk, linseed-tea, a solution of gum-arabic, or a decoction of marsh-mallow roots. The patient must begin with small doses of the lees, as thirty or forty drops, and increase by degrees, as far as the stomach can bear it.*

Though the soap-lees and lime-water are the most powerful medicines which have hitherto been discovered for the stone, yet there are some things of a more simple nature, which in certain cases are found to be beneficial, and therefore deserve a trial. An infusion of the seeds of *daucus sylvestris*, or wild carrot, sweetened with honey, has been found to give considerable ease in cases where the stomach could not bear any thing of an acrid nature. A decoction of raw coffee-berries taken morning and evening, to the quantity of eight or ten ounces, with ten drops of sweet spirit of nitre, has likewise been found very efficacious in bringing away large quantities of earthy matter in flakes. Honey is likewise found to be of considerable service, and may be taken in gruel, or in any other form that is more agreeable.

The only other medicine which we shall mention is the *uva ursi*. It has been greatly extolled of late both for the gravel and stone. It seems, however, to be in all respects inferior to the soap and lime-water; but it is less disagreeable, and has frequently, to my knowledge, relieved gravelly complaints. It is generally taken in powder from half a dram to a whole dram, two or three times a-day. It may, however, be taken to the quantity of seven or eight drams a-day, with great safety and good effect.

No means have hitherto been devised for removing the tormenting disorder of the stone in the bladder. The British Parliament once paid five thousand pounds for a pretended solvent, long since forgotten; which proves with what caution the efficacy of specifics is to be believed. Our efforts to procure a remedy, however, ought by no means to be discontinued, as a solvent may yet be discovered. The consistence of the stones varies so much, that there is reason to fear no medicine will be found powerful enough

* The caustic alkali may be prepared by mixing two parts of quicklime with one of potashes, and suffering them to stand till the lixivium be formed, which must be carefully filtrated before it be used. If the solution does not happen readily, a small quantity of water may be added to the mixture.

to dissolve the hardest of them without destroying the bladder; although some hard substances are known to be soluble in seemingly mild ones.

Instances have occurred where stones, after getting into the urethra, were brought away by means of a bent probe. This can only happen where the stones are small; though some flattish stones have been brought away in this manner that measured two inches round. Riding on a hard-trotting horse, or in a carriage on a rough road, might bring down a small stone.

Persons troubled with the stone should not delay the operation of cutting too long, when it is known there is a stone in the bladder too large for passing along the urethra, as it will quickly increase so that it cannot be extracted without a laceration of the parts, and that too at a time when the patient's habit has become too irritable.

CHAP. XXXIII.

INVOLUNTARY DISCHARGES OF BLOOD.

Spontaneous or involuntary discharges of blood often happen from various parts of the body. These, however, are so far from being always dangerous, that they often prove salutary. When such discharges are critical, which is frequently the case in fevers, they ought not to be stopped. Nor, indeed, is it proper at any time to stop them unless they be so great as to endanger the patient's life. Most people, afraid of the smallest discharge of blood from any part of the body, fly immediately to the use of styptic and astringent medicines, by which means an inflammation of the brain, or some other fatal disease, is occasioned, which, had the discharge been allowed to go on, might have been prevented.

Periodical discharges of blood, from whatever part of the body they proceed, must not be stopped. They are always the efforts of Nature to relieve herself; and fatal diseases have often been the consequence of obstructing them. It may, indeed, be sometimes necessary to check the violence of such discharges; but even this requires the greatest caution. Instances might be given where the stopping

of a small periodical flux of blood from one of the fingers, has proved fatal to the health.

In the early period of life, bleeding at the nose is very common. Those who are farther advanced in years are more liable to hæmoptoe, or discharge of blood from the lungs. After the middle period of life, hæmorrhoidal fluxes are most common; and in the decline of life, discharges of blood from the urinary passages.

Involuntary fluxes of blood may proceed from very different, and often from quite opposite causes. Sometimes they are owing to a particular construction of the body, as a sanguine temperament, a laxity of the vessels, a plethoric habit, &c. At other times they proceed from a determination of the blood towards one particular part, as the head, the hæmorrhoidal veins, &c. They may likewise proceed from an inflammatory disposition of the blood, in which case there is generally some degree of fever: this likewise happens when the flux is occasioned by an obstructed perspiration, or a stricture upon the skin, the bowels, or any particular part of the system.

But a dissolved state of the blood will likewise occasion hæmorrhages. Thus in putrid fevers, the dysentery, the scurvy, the malignant small-pox, &c. there are often very great discharges of blood from different parts of the body. They may likewise be brought on by too liberal an use of medicines which tend to dissolve the blood, as cantharides, the volatile alkaline salt, &c. Food of an acrid or irritating quality may likewise occasion hæmorrhages: as also strong purges and vomits, or any thing that greatly stimulates the bowels.

Violent passions or agitations of the mind will likewise have this effect. These often cause bleeding at the nose, and I have known them sometimes occasion an hæmorrhage in the brain. Violent efforts of the body, by overstraining or hurting the vessels, may have the same effect, especially when the body is long kept in an unnatural posture, as hanging the head very low, &c.

The cure of an hæmorrhage must be adapted to its cause. When it proceeds from too much blood, or a tendency to inflammation, bleeding, with gentle purges and other evacuations, will be necessary. It will likewise be proper for the patient in this case to live chiefly upon a vegetable diet, to

avoid all strong liquors, and food that is of an acrid, hot, or stimulating quality. The body should be kept cool, and the mind easy.

When an hæmorrhage is owing to a putrid or dissolved state of the blood, the patient ought to live chiefly upon acrid fruits with milk, and vegetables of a nourishing nature, as sago, salop, &c. His drink may be wine diluted with water, and sharpened with the juice of lemon, vinegar, or spirits of vitriol. The best medicine in this case is the Peruvian bark; which may be taken according to the urgency of the symptoms.

When a flux of blood is the effect of acrid food, or of strong stimulating medicines, the cure is to be effected by soft and mucilaginous diet. The patient may likewise take frequently about the bulk of a nutmeg of Locatelli's balsam, or the same quantity of spermaceti.

When an obstructed perspiration, or a stricture upon any part of the system, is the cause of an hæmorrhage, it may be removed by drinking warm diluting liquors, lying a-bed, bathing the extremities in warm water, &c.

OF BLEEDING AT THE NOSE.

Bleeding at the nose is commonly preceded by some degree of quickness of the pulse, flushing in the face, pulsation of the temporal arteries, heaviness in the head, dimness of the sight, heat and itching of the nostrils, &c.

To persons who abound with blood, this discharge is very salutary. It often cures a vertigo, the head-ache, a phrenzy, and even an epilepsy. In fevers, where there is a great determination of blood towards the head, it is of the utmost service. It is likewise beneficial in inflammations of the liver and spleen, and often in the gout and rheumatism. In all diseases where bleeding is necessary, a spontaneous discharge of blood from the nose is of much more service than the same quantity let with a lancet.

In a discharge of blood from the nose, the great point is to determine whether it ought to be stopped or not. It is a common practice to stop the bleeding, without considering whether it be a disease, or the cure of a disease. This conduct proceeds from fear, but it has often bad, and sometimes fatal consequences.

When a discharge of blood from the nose happens in an inflammatory disease, there is always reason to believe that it may prove salutary; and therefore it should be suffered to go on, at least as long as the patient is not weakened by it.

When it happens to persons in perfect health, who are full of blood, it ought not to be suddenly stopped, especially if the symptoms of plethora, mentioned above, have preceded it. In this case it cannot be stopped without risking the patient's life.

In fine, whenever bleeding at the nose relieves any bad symptom, and does not proceed so far as to endanger the patient's life, it ought not to be stopped. But when it returns frequently, or continues till the pulse becomes low, the extremities begin to grow cold, the lips pale, or the patient complains of being sick or faint, it must immediately be stopped.

For this purpose the patient should be set nearly upright, with his head reclining a little, and his legs immersed in water about the warmth of new milk. His hands ought likewise to be put in lukewarm water, and his garters may be tied a little tighter than usual. Ligatures may be applied to the arms, about the place where they are usually made for bleeding, and with nearly the same degree of tightness. These must be gradually slackened as the blood begins to stop, and removed entirely as soon as it gives over.

Sometimes dry lint put up the nostrils will stop the bleeding. When this does not succeed, dossils of lint dipped in strong spirits of wine may be put up the nostrils; or if that cannot be had, they must be dipped in brandy. Blue vitriol dissolved in water may likewise be used for this purpose, or a tent dipped in the white of an egg well beat up, may be rolled in a powder made of equal parts of white sugar, burnt alum, and white vitriol, and put up the nostril from whence the blood issues.

Internal medicines can hardly be of use here, as they have seldom time to operate. It may not, however, be amiss to give the patient half an ounce of Glauber's salt, and the same quantity of manna, dissolved in four or five ounces of barley-water. This may be taken at a draught, and repeated if it does not operate in a few hours. Ten or twelve grains of nitre may be taken in a glass of cold water and vinegar every hour, or oftener if the stomach will bear

it. If a stronger medicine be necessary, a tea-cupful of the tincture of roses, with twenty or thirty drops of the weak spirit of vitriol, may be taken every hour. When these things cannot be had, the patient may drink water with a little common salt in it, or equal parts of water and vinegar.*

If the genitals be immersed for some time in cold water, it will generally stop a bleeding at the nose. I have not known this fail.

Sometimes, when the bleeding is stopped outwardly, it continues inwardly. This is very troublesome, and requires particular attention, as the patient is apt to be suffocated with the blood, especially if he falls asleep, which he is very ready to do after losing a great quantity of blood.

When the patient is in danger of suffocation from the blood getting into his throat, the passages may be stopped by drawing threads up the nostrils, and bringing them out at the mouth, then fastening pieces of sponge, or small rolls of linen cloth to their extremities; afterwards drawing them back, and tying them on the outside with a sufficient degree of tightness.

After the bleeding is stopped, the patient ought to be kept as easy and quiet as possible. He should not pick his nose, nor take away the tents or clotted blood till they fall off of their own accord, and should not lie with his head low.

Those who are affected with frequent bleeding at the nose, ought to bathe their feet often in warm water, and keep them warm and dry. They ought to wear nothing tight about their necks, to keep the body as much in an erect posture as possible, and never to view any object obliquely. If they have too much blood, a vegetable diet, with now and then a cooling purge, is the safest way to lessen it.

But when the disease proceeds from a thin dissolved state of the blood, the diet should be rich and nourishing; as strong broths and jellies, sago-gruel, with wine and sugar, &c. Infusions of the Peruvian bark in wine ought likewise to be taken, and persisted in for a considerable time.

* From ten to twenty drops of the spirits of turpentine in a little water given frequently, seldom fails to stop a bleeding at the nose, or from any other part.

OF THE BLEEDING AND BLIND PILES.

A discharge of blood from the hæmorrhoidal vessels is called the *bleeding piles.* When the vessels only swell and discharge no blood, but are exceedingly painful, the disease is called the *blind piles.*

Persons of a loose spongy fibre, of a bulky size, who live high, and lead a sedentary, inactive life, are most subject to this disease. It is often owing to an hereditary disposition. Where this is the case, it attacks persons more early in life than when it is accidental. Men are more liable to it than women, especially those of a sanguine, plethoric, or a scorbutic habit, or of a melancholy disposition.

The piles may be occasioned by an excess of blood, by strong aloetic purges, high-seasoned food, drinking great quantities of sweet wine, the neglect of bleeding, or other customary evacuations, much riding, great costiveness, or any thing that occasions hard or difficult stools. Anger, grief, or other violent passions, will likewise occasion the piles. I have often known them brought on by sitting on the damp ground. A pair of thin breeches will excite the disorder in a person who is subject to it, and sometimes even in those who never had it before. Pregnant women are often afflicted with the piles.

A flux of blood from the *anus* is not always to be treated as a disease. It is even more salutary than bleeding at the nose, and often prevents or carries off diseases. It is peculiarly beneficial in the gout, rheumatism, asthma, and hypochondriacal complaints, and often proves critical in colics, and inflammatory fevers.

In the management of the patient, regard must be had to his habit of body, his age, strength, and manner of living. A discharge which might be excessive and prove hurtful to one, may be very moderate, and even salutary to another. That only is to be esteemed dangerous, which continues too long, and is in such quantity as to waste the patient's strength, hurt the digestion, nutrition, and other functions necessary to life.

When this is the case, the discharge must be checked by a proper regimen, and astringent medicines. The DIET must be cool but nourishing, consisting chiefly of bread,

milk, cooling vegetables and broths. The DRINK may be chalybeate water, orange-whey, decoctions or infusions of the astringent and mucilaginous plants, as the tormentil root, bistort, the marsh-mallow roots, &c.

Old conserve of red roses is a very good medicine in this case. It may be mixed with new milk, and taken in the quantity of an ounce three or four times a-day. This medicine is in no great repute, owing to its being seldom taken in such quantity as to produce any effects; but when taken as here directed, and duly persisted in, I have known it perform very extraordinary cures in violent hæmorrhages, especially when assisted by the tincture of roses; a tea-cupful of which may be taken about an hour after every dose of the conserve.

The Peruvian bark is likewise proper in this case, both as a strengthener and astringent. Half a dram of it may be taken in a glass of red wine, sharpened with a few drops of the elixir of vitriol, three or four times a-day.

The bleeding piles are sometimes periodical, and return regularly once a month, or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. Some have entirely ruined their health by stopping a periodical discharge of blood from the hæmorrhoidal veins.

In the *blind piles*, bleeding is generally of use. The diet must be light and thin, and the drink cool and diluting. It is likewise necessary that the body be kept gently open. This may be done by small doses of the flower of brimstone and cream of tartar. These may be mixed in equal quantities, and a tea-spoonful taken three or times a-day, or oftener if necessary. Or an ounce of the flower of brimstone and half an ounce of purified nitre may be mixed with three or four ounces of the lenitive electuary, and a tea-spoonful of it taken three or four times a-day.

Emollient clysters are here likewise beneficial; but there is sometimes such an astriction of the *anus*, that they cannot be thrown up. In this case I have known a vomit have a very good effect.

When the piles are exceeding painful and swelled, but discharge nothing, the patient must sit over the steams of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of

bread and milk, or of leeks fried with butter. If these do not produce a discharge, and the piles appear large, leeches must be applied as near them as possible; or if they will fix upon the piles themselves, so much the better. When leeches will not fix, the piles may be opened with a lancet. The operation is very easy, and is attended with no danger.

Various ointments, and other external applications, are recommended in the piles; but I do not remember to have seen any effects from these worth mentioning. Their principal use is to keep the part moist, which may be done as well by a soft poultice, or an emollient cataplasm. When the pain, however, is very great, a liniment made of two ounces of emollient ointment, and half an ounce of liquid laudanum, beat up with the yoke of an egg, may be applied.

Aloes, which form a principal part of most of the advertised purgative pills, are frequently the cause of the piles. An habitual costiveness is much more effectually and safely removed by a spoonful of castor oil taken occasionally in an evening.

A weak solution of sugar of lead with a little laudanum, is the best external remedy when the piles are very painful. An ointment made of one third finely powdered galls, and two thirds hogslard, is likewise of great service. An injection of lime-water, or an infusion of galls, may be used with advantage when the piles are seated high.

The pain is often removed by an emetic, or taking twice a-day thirty drops of balsam of copaiva on a little moist sugar. A pile having a narrow neck is best extirpated by the knife; if it be large, or have a broad basis, a double ligature may be passed through it, and tied on each side.

Piles ought to be carefully attended to, as when they are neglected they are very apt to produce a fistula. This painful disorder may be discovered by stains on the linen, proceeding from a small orifice near the anus. Such stimulants should be applied as will produce a more active inflammation on the sides of the ulcer, so as to make them adhere together. Irritating injections, when duly persisted in, have sometimes been found effectual for this purpose. A wine glass of sea-water taken every night for several weeks, has likewise been found useful.

The best means of curing a fistula is a surgical operation. By the operation of cutting, the ulcer is reduced to the state

of a simple wound, and is healed as such. If this remedy is neglected too long, the disease gradually diffuses itself in various directions through the cellular substance surrounding the rectum; and new openings are formed, which render the complaint more difficult to cure.

This operation is sometimes performed by passing a silk thread, or piece of flexible gold wire, in at the external orifice of the fistula, and bringing it out at the anus, and twisting the ends together, which is daily repeated till it cuts its way out. The incision, however, is a more certain and effectual way of eradicating the disease.

SPITTING OF BLOOD.

We mean here to treat of that discharge of blood from the lungs only which is called an *hæmoptoe*, or *spitting of blood*. Persons of a slender make, and a lax fibre, who have long necks and strait breasts, are most liable to this disease. It is most common in the spring, and generally attacks people before they arrive at the prime or middle period of life. It is a common observation, that those who have been subject to bleeding at the nose when young, are afterwards most liable to an hæmoptoe.

Causes.—An hæmoptoe may proceed from excess of blood, from a peculiar weakness of the lungs, or a bad conformation of the breast. It is often occasioned by excessive drinking, running, wrestling, singing, or speaking aloud. Such as have weak lungs, ought to avoid all violent exertions of that organ, as they value life. They should likewise guard against violent passions, excessive drinking, and every thing that occasions a rapid circulation of the blood.

This disease may likewise proceed from wounds of the lungs. These may either be received from without, or they may be occasioned by hard bodies getting into the windpipe, and so falling down upon the lungs, and hurting that tender organ. The obstruction of any customary evacuation may occasion a spitting of blood; as neglect of bleeding or purging at the usual seasons, the stoppage of the bleeding piles in men, or the menses in women, &c. It may likewise proceed from a polypus, schirrous concretion, or any thing that obstructs the circulation of the blood in the lungs. It is often the effect of a long and violent cough; in which

case it is generally the forerunner of a consumption. A violent degree of cold suddenly applied to the external part of the body will occasion an hæmoptoe. It may likewise be occasioned by breathing air which is too much rarified to be able properly to expand the lungs. This is often the case with those who work in hot places, as furnaces, glass-houses, or the like. It is likewise said to happen to such as ascend to the top of very high mountains, as the Peak of Teneriffe, &c.

Spitting of blood is not always to be considered as a primary disease. It is often only a symptom, and in some diseases not an unfavourable one. This is the case in pleurisies, peripneumonies, and sundry other fevers. In a dropsy, scurvy, or consumption, it is a bad symptom, and shews that the lungs are ulcerated.

Symptoms.—Spitting of blood is generally preceded by a sense of weight and oppression of the breast, a dry tickling cough, hoarseness, and a difficulty of breathing. Sometimes it is ushered in with shivering, coldness of the extremities, costiveness, great lassitude, flatulence, pain of the back and loins, &c. As these shew a general stricture upon the vessels, and a tendency of the blood to inflammation, they are commonly the forerunners of a very copious discharge. The above symptoms do not attend a discharge of blood from the gums or fauces, by which means they may always be distinguished from an hæmoptoe. Sometimes the blood that is spit up is thin, and of a florid red colour; and at other times it is thick, and of a dark or blackish colour; nothing, however, can be inferred from this circumstance, but that the blood has lain a longer or shorter time in the breast before it was discharged.

Spitting of blood, in a strong healthy person, of a sound constitution, is not very dangerous; but when it attacks the tender and delicate, or persons of a weak lax fibre, it is with difficulty removed. When it proceeds from a schirrus or polypus of the lungs, it is bad. The danger is greater when the discharge proceeds from the rupture of a large vessel than of a small one. When the extravasated blood is not spit up, but lodges in the breast, it corrupts, and greatly increases the danger. When the blood proceeds from an ulcer in the lungs, it is generally fatal.

Regimen.—The patient ought to be kept cool and easy.

Every thing that heats the blood, or quickens the circulation, increases the danger. The mind ought likewise to be soothed, and every occasion of exciting the passions avoided. The diet should be soft, cooling, and slender; as rice boiled with milk, small broths, barley-gruel, panado, &c. The diet, in this case, can scarcely be too low. Even water-gruel is sufficient to support the patient for some days. All strong liquors must be avoided. The patient may drink milk and water, barley-water, whey, butter-milk, and such like. Every thing, however, should be drunk cold, and in small quantities at a time. He should observe the strictest silence, or at least speak with a very low voice.

MEDICINE.—This, like the other involuntary discharges of blood, ought not to be suddenly stopped by astringent medicines; more mischief is often done by these, than if it were suffered to go on. It may, however, proceed so far as to weaken the patient, and even endanger his life; in which case proper means must be used for restraining it.

The body should be kept gently open by laxative diet; as roasted apples, stewed prunes, and such like. If these should not have the desired effect, a tea-spoonful of the lenitive electuary, may be taken twice or thrice a-day as is found necessary. If the bleeding proves violent, ligatures may be applied to the extremities, as directed for a bleeding at the nose.

If the patient be hot or feverish, bleeding and small doses of nitre will be of use; a scruple or half a dram of nitre may be taken in a cup of his ordinary drink twice or thrice a-day. His drink may likewise be sharpened with acids, as juice of lemon, or a few drops of the spirit of vitriol; or he may take frequently a cup of the tincture of roses.

Bathing the feet and legs in lukewarm water, has likewise a very good effect in this disease. Opiates, too, are sometimes beneficial; but these must be administered with caution. Ten or twelve drops of laudanum may be given in a cup of barley-water twice a-day, and continued for some time, provided they be found beneficial.

The conserve of roses is likewise a very good medicine in this case, provided it be taken in sufficient quantity, and long enough persisted in. It may be taken to the quantity of three or four ounces a-day; and if the patient be troubled

with a cough, it should be made into an electuary with balsamic syrup, and a little of the syrup of poppies.

If stronger astringents be necessary, fifteen or twenty drops of the elixir of vitriol may be given in a glass of water three or four times a-day.

Those who are subject to frequent returns of this disease should avoid all excess. Their diet should be light and cool, consisting chiefly of milk and vegetables. Above all, let them beware of vigorous efforts of the body, and violent agitations of the mind.

VOMITING OF BLOOD.

This is not so common as the other discharges of blood which have already been mentioned; but it is very dangerous, and requires particular attention.

Vomiting of blood is generally preceded by pain of the stomach, sickness, and nausea; and is accompanied with great anxiety, and frequent fainting fits.

This disease is sometimes periodical; in which case it is less dangerous. It often proceeds from an obstruction of the menses in women; and sometimes from the stopping of the hæmorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poison, sharp or hard substances taken into the stomach, &c. It is often the effect of obstructions in the liver, the spleen, or some of the other viscera. It may likewise proceed from external violence, as blows or bruises, or from any of the causes which produce inflammation. In hysteric women, vomiting of blood is a very common, but by no means a dangerous symptom.

A great part of the danger in this disease arises from the extravasated blood lodging in the bowels, and becoming putrid, by which means a dysentery or putrid fever may be occasioned. The best way of preventing this, is to keep the body gently open, by frequently exhibiting emollient clysters. Purges must not be given till the discharge is stopt, otherwise they will irritate the stomach, and increase the disorder. All the food and drink must be of a mild cooling nature, and taken in small quantities. Even drinking cold water has sometimes proved a remedy, but it will succeed better when sharpened with the weak spirits of vi-

triol. When there are signs of an inflammation, bleeding may be necessary; but the patient's weakness will seldom permit it. Opiates may be of use; but they must be given in very small doses, as four or five drops of liqnid laudanum twice or thrice a-day.

After the discharge is over, as the patient is generally troubled with gripes, occasioned by the acrimony of the blood lodged in the intestines, gentle purges will be necessary.

OF BLOODY URINE.

This is a discharge of blood from the vessels of the kidneys or bladder, occasioned by their being either enlarged, broken, or eroded. It is more or less dangerous according to the different circumstances which attend it.

When pure blood is voided suddenly, without interruption and without pain, it proceeds from the kidneys; but if the blood be in small quantity, of a dark colour, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. When bloody urine is occasioned by a rough stone descending from the kidneys to the bladder, which wounds the *ureter*, it is attended with a sharp pain in the back, and difficulty of making water. If the coats of the bladder are hurt by a stone, and the bloody urine follows, it is attended with the most acute pain, and a previous stoppage of urine.

Bloody urine may, likewise, be occasioned by falls, blows, the lifting or carrying of heavy burdens, hard riding, or any violent motion. It may also proceed from ulcers of the bladder, from a stone lodged in the kidneys, or from violent purges, or sharp diuretic medicines, especially cantharides.

Bloody urine is always attended with some degree of danger; but it is peculiarly so when mixed with purulent matter, as this shews an ulcer somewhere in the urinary passages. Sometimes this discharge proceeds from excess of blood, in which case it is rather to be considered as a salutary evacuation than a disease. If the discharge, however, be very great, it may waste the patient's strength, and occasion an ill habit of body, a dropsy, or a consumption.

The treatment of this disorder must be varied according to the different causes from which it proceeds.

When it is owing to a stone in the bladder, the cure de-

pends upon an operation, a description of which would be foreign to our purpose.

If it be attended with a plethora, and symptoms of inflammation, bleeding will be necessary. The body must likewise be kept open by emollient clysters, or cooling purgative medicines; as cream of tartar, rhubarb, manna, or small doses of lenitive electuary.

When bloody urine proceeds from a dissolved state of the blood, it is commonly the symptom of some malignant disease; as the small-pox, a putrid fever, or the like. In this case the patient's life depends on the liberal use of the Peruvian bark, wine and acids, as has already been shewn.

When there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and his drink of a soft, healing, balsamic quality, as decoctions of marsh-mallow roots with liquorice, solutions of gum-arabic, &c. Three ounces of marsh-mallow roots, and half an ounce of liquorice, may be boiled in two English quarts of water to one; two ounces of gum-arabic, and half an ounce of purified nitre, may be dissolved in the strained liquor, and a tea-cupful of it taken four or five times a-day.

The early use of astringents in this disease has often bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammations, abscess, and ulcers. If, however, the case be urgent, or the patient seems to suffer from the loss of blood, gentle astringents may be necessary. In this case the patient may take three or four ounces of lime-water, with half an ounce of the tincture of Peruvian bark, three times a-day; or he may take an ounce or two of the conserve of roses three or four times a-day, drinking a tea-cupful of the tincture of roses after it; or if stronger styptics be necessary, a dram of Arminian bole in a cup of whey may be taken three or four times a-day.

OF THE DYSENTERY, OR BLOODY FLUX.

This disease prevails in the spring and autumn. It is most common in marshy countries, where, after hot and dry summers, it is apt to become epidemic. Persons are most liable to it who are much exposed to the night air, or who live in places where the air is confined or unwhole-

some. Hence it often proves fatal in camps, on shipboard, in jails, hospitals, and such like places.

Causes.—The dysentery may be occasioned by any thing that obstructs the perspiration, or renders the humours putrid; as damp beds, wet clothes, unwholesome diet, bad air, &c. But it is most frequently communicated by infection. This ought to make people extremely cautious in going near such persons as labour under the disease. Even the smell of the patient's excrements has been known to communicate the infection.

Symptoms.—It is known by a flux of the belly, attended by violent pain of the bowels, a constant inclination to go to stool, and generally more or less blood in the stools. It begins, like other fevers, with chillness, loss of strength, a quick pulse, great thirst, and an inclination to vomit. The stools are at first greasy and frothy, afterwards they are streaked with blood, and at last have frequently the appearance of pure blood, mixed with small filaments resembling bits of skin. Worms are sometimes passed both upwards and downwards through the whole course of the disease. When the patient goes to stool, he feels a bearing down, as if the whole bowels were falling out, and sometimes a part of the intestine is actually protruded, which proves exceeding troublesome, especially in children. Flatulency is likewise a troublesome symptom, especially towards the end of the disease.

This disease may be distinguished from a diarrhœa, or looseness, by the acute pain in the bowels, and the blood which generally appears in the stools. It may be distinguished from the *cholera morbus* by its not being attended with such violent and frequent fits of vomiting, &c.

When the dysentery attacks the old, the delicate, or such as have been wasted by the gout, the scurvy, or other lingering diseases, it generally proves fatal. Vomiting and hiccuping are bad signs, as they shew an inflammation of the stomach. When the stools are green, black, or have an exceeding disagreeable cadaverous smell, the danger is very great, as it shows the disease to be of a putrid kind. It is an unfavourable symptom when clysters are immediately returned; but still more so when the passage is so obstinately shut that they cannot be injected. A feeble pulse, coldness

of the extremities, with difficulty of swallowing, and convulsions, are signs of approaching death.

REGIMEN.—Nothing is of more importance in this disease than cleanliness. It contributes greatly to the recovery of the patient, and no less to the safety of such as attend him. In all contagious diseases the danger is increased, and the infection spread, by the neglect of cleanliness; but in no one more than in this. Every thing about the patient should be frequently changed. The excrements should never be suffered to continue in his chamber, but removed immediately and buried under ground. A constant stream of fresh air should be admitted into his chamber; and it ought frequently to be sprinkled with vinegar, juice of lemon, or some other strong acids.

The patient must not be discouraged, but his spirits kept up in hopes of a cure. Nothing tends more to render any putrid disease mortal, than the fears and apprehensions of the sick. All diseases of this nature have a tendency to sink and depress the spirits, and when that is increased by fears and alarms from those whom the patient believes to be persons of skill, it cannot fail to have the worst effect.

A flannel waistcoat worn next the skin has often a very good effect in the dysentery. This promotes the perspiration without overheating the body. Great caution, however, is necessary in leaving it off. I have often known a dysentery brought on by imprudently throwing off a flannel waistcoat before the season was sufficiently warm. For whatever purpose this piece of dress is worn, it should never be left off but in a warm season.

In this disease the greatest attention must be paid to the patient's diet. Flesh, fish, and every thing that has a tendency to turn putrid or rancid on the stomach, must be abstained from. Apples boiled in milk, water-pap, and plain light pudding, with broth made of the gelatinous parts of animals, may constitute the principal part of the patient's food. Gelatinous broth not only answers the purpose of food, but is likewise a medicine. I have often known dysenteries, which were not of a putrid nature, cured by it, after pompous medicines had proved ineffectual.*

* The manner of making this broth is, to take a sheep's head and feet, with the skin upon them, and to burn the wool off with a hot iron; afterwards to boil them till the broth is quite a jelly. A little cinnamon

Another kind of food very proper in the dysentery, which may be used by such as cannot take the broth mentioned above, is made by boiling a few handfuls of fine flour tied in a cloth, for six or seven hours, till it becomes as hard as starch. Two or three table-spoonfuls of this may be grated down, and boiled in such a quantity of new milk and water as to be of the thickness of pap. This may be sweetened to the patient's taste, and taken for his ordinary food.*

In a *putrid dysentery* the patient may be allowed to eat freely of most kinds of good ripe fruit; as apples, grapes, gooseberries, currant-berries, strawberries, &c. These may either be eaten raw or boiled, with or without milk, as the patient chooses. The prejudice against fruit in this disease is so great, that many believe it to be the common cause of dysenteries. This, however, is an egregious mistake. Both reason and experience shew, that good fruit is one of the best medicines, both for the prevention and cure of the dysentery. Good fruit is in every respect calculated to counteract that tendency to putrefaction, from whence the most dangerous kind of dysentery proceeds. The patient in such a case ought therefore to be allowed to eat as much fruit as he pleases, provided it be ripe.†

or mace may be added, to give the broth an agreeable flavour, and the patient may take a little of it warm with toasted bread three or four times a-day. A clyster of it may likewise be given twice a-day. Such as cannot use broth made in this way, may have the head and feet skinned; but we have reason to believe that this injures the medicine. It is not our business here to reason upon the nature and qualities of medicine, otherwise this might be shewn to possess virtues every way suited to the cure of a dysentery which does not proceed from a putrid state of the humours. One thing we know, which is preferable to all reasoning, that whole families have often been cured by it, after they had used many other medicines in vain. It will, however, be proper that the patient take a vomit, and a dose or two of rhubarb, before he begins to use the broth. It will likewise be necessary to continue the use of it for a considerable time, and to make it the principal food.

* The learned and humane Dr Rutherford, late professor of medicine in the University of Edinburgh, used to mention this food in his public lectures with great encomiums. He directed it to be made by tying a pound or two of the finest flour, as tight as possible, in a linen rag, afterwards to dip it frequently in water, and to dridge the outside with flour till a cake or crust was formed around it, which prevents the water from soaking into it while boiling. It is then to be boiled till it becomes a hard dry mass, as directed above. This, when mixed with milk and water, will not only answer the purpose of food, but may likewise be given in clysters.

† I lately saw a young man who had been seized with a dysentery in North America. Many things had been tried there for his relief, but to no purpose. At length, tired out with disappointments from medicine,

The most proper drink in this disorder is whey. The dysentery has often been cured by the use of clear whey alone. It may be taken both for drink, and in form of clyster. When whey cannot be had, barley-water sharpened with cream of tartar may be drank, or a decoction of barley and tamarinds; two ounces of the former and one of the latter may be boiled in two English quarts of water to one. Warm water, water-gruel, or water wherein hot iron has been frequently quenched, are all very proper, and may be drank in turns. Camomile-tea, if the stomach will bear it, is an exceeding proper drink. It both strengthens the stomach, and by its antiseptic quality tends to prevent a mortification of the bowels.

MEDICINE.—At the beginning of this disease it is always necessary to cleanse the first passages. For this purpose a vomit of ipecacuanha must be given, and wrought off with weak camomile-tea. Strong vomits are seldom necessary here. A scruple, or at most half a dram, of ipecacuanha, is generally sufficient for an adult, and sometimes a very few grains will suffice. The day after the vomit, half a dram or two scruples of rhubarb must be taken; or what will answer the purpose rather better, an ounce, or an ounce and a half, of Epsom salts. This dose may be repeated every other day for two or three times. Afterwards small doses of ipecacuanha may be taken for some time. Two or three grains of the powder may be mixed in a table-spoonful of the syrup of poppies, and taken three times a-day.

These evacuations, and the regimen prescribed above, will often be sufficient to effect a cure. Should it, however, happen otherwise, the following astringent medicines may be used:

A clyster of starch or fat mutton broth, with thirty or forty drops of liquid laudanum in it, may be administered

and reduced to skin and bone, he came over to Britain, rather with a view to die among his relations, than with any hopes of a cure. After taking sundry medicines here with no better success than abroad, I advised him to leave off the use of drugs, and to trust entirely to a diet of milk and fruits with gentle exercise. Strawberries was the only fruit he could procure at that season. These he ate with milk twice and sometimes thrice a-day. The consequence was, that in a short time his stools were reduced from upwards of twenty in a day, to three or four, and sometimes not so many. He used the other fruits as they came in, and was in a few weeks so well as to leave that part of the country where I was, with a view to return to America.

twice a-day. At the same time an ounce of gum-arabic, and half an ounce of gum-tragacanth, may be dissolved in an English pint of barley-water, over a slow fire, and a table-spoonful of it taken every hour.

If these have not the desired effect, the patient may take, four times a-day, about the bulk of a nutmeg of the *Japonic confection*, drinking after it a tea-cupful of the decoction of logwood.

Persons who have been cured of this disease are very liable to relapse; to prevent which, great circumspection with respect to diet is necessary. The patient must abstain from all fermented liquors, except now and then a glass of good wine; but he must drink no kind of malt liquor. He should likewise abstain from animal food, as fish and flesh, and live principally on milk and vegetables.

Gentle exercise and wholesome air are likewise of importance. The patient should go to the country as soon as his strength will permit, and should take exercise daily on horseback, or in a carriage. He may likewise use bitters infused in wine or brandy, and may drink twice a-day a gill of lime-water mixed with an equal quantity of new milk.

When dysenteries prevail, we would recommend a strict attention to cleanliness, a spare use of animal food, and the free use of sound ripe fruits, and other vegetables. The night-air is to be carefully avoided, and all communication with the sick. Bad smells are likewise to be shunned, especially those which arise from putrid animal substances. The necessaries where the sick go are carefully to be avoided.

When the first symptoms of the dysentery appear, the patient ought immediately to take a vomit, to go to bed, and drink plentifully of weak warm liquor, to promote a sweat. This, with a dose or two of rhubarb at the beginning, would often carry off the disease. In countries where dysenteries prevail, we would advise such as are liable to them, to take either a vomit or a purge every spring or autumn, as a preventive.

There are sundry other fluxes of the belly, as the LIENTERY and CŒLIAC PASSION, which, though less dangerous than the dysentery, yet merit consideration. These diseases generally proceed from a relaxed state of the stomach and intestines, which is sometimes so great, that the food

passes through them with hardly any sensible alteration; and the patient dies merely from the want of nourishment.

When the lientery or cœliac passion succeed to a dysentery, the case is bad. They are likewise dangerous in old age, especially when the constitution has been broken by excess or acute diseases. If the stools be very frequent and quite crude, the thirst great, with little urine, the mouth ulcerated, and the face marked with spots of different colours, the danger is very great.

The treatment of the patient is in general the same as in the dysentery. In all obstinate fluxes of the belly, the cure must be attempted, by first cleansing the stomach and bowels with gentle vomits and purges; afterwards such a diet as has a tendency to heal and strengthen the bowels, with opiates and astringent medicines, will generally complete the cure.

The same observation holds with respect to a TENESMUS, or frequent desire of going to stool. This disease resembles the dysentery so much, both in its symptoms and method of cure, that we think it needless to insist upon it.

CHAP. XXXIV.

OF THE HEAD-ACHE.

ACHES and pains proceed from very different causes, and may affect any part of the body: but we shall point out those only which occur most frequently, and are attended with the greatest danger.

When the head-ache is slight, and affects a particular part of the head only, it is called *cephalgia;* when the whole head is affected, *cephalœa;* and when one side only, *hemicrania.* A fixed pain in the forehead, which may be covered with the end of the thumb, is called the *clavis hystericus.*

There are also other distinctions. Sometimes the pain is internal, sometimes external; sometimes it is an original disease, and at other times only symptomatic. When the head-ache proceeds from a hot bilious habit, the pain is very acute and throbbing, with a considerable heat of the part affected. When from a cold phlegmatic habit, the patient complains of a dull heavy pain, and has a sense of coldness

in the part. This kind of head-ache is sometimes attended with a degree of stupidity or folly.

Whatever obstructs the free circulation of the blood through the vessels of the head, may occasion a head-ache. In persons of a full habit, who abound with blood, the head-ache often proceeds from the suppression of customary evacuations; as bleeding at the nose, sweating of the feet, &c. It may likewise proceed from any cause that determines a great flux of blood towards the head; as coldness of the extremities, or hanging down the head for a long time. Whatever prevents the return of the blood from the head, will likewise occasion a head-ache; as looking long obliquely at any object, wearing any thing tight about the neck, a new hat, or the like.

When a head-ache proceeds from the stoppage of a running at the nose, there is a heavy, obtuse, pressing pain in the fore part of the head, in which there seems to be such a weight, that the patient can scarcely hold it up. When it is occasioned by the caustic matter of the venereal disease, it generally affects the skull, and often produces a *caries* of the bones.

Sometimes the head-ache proceeds from the repulsion or retrocession of the gout, the erysipelas, the small-pox, measles, itch, or other eruptive diseases. What is called a *hemicrania* generally proceeds from crudities or indigestion. Inanition, or emptiness, will also occasion head-aches. I have often seen instances of this in nurses who gave suck too long, or who did not take a sufficient quantity of solid food.

There is likewise a most violent, fixed, constant, and almost intolerable head-ache, which occasions great debility both of body and mind, prevents sleep, destroys the appetite, causes a *vertigo*, dimness of sight, a noise in the ears, convulsions, epileptic fits, and sometimes vomiting, costiveness, coldness of the extremities, &c.

The head-ache is often symptomatic in continual and intermitting fevers, especially quartans. It is likewise a very common symptom in hysteric and hypochondriac complaints.

When a head-ache attends an acute fever, with pale urine, it is an unfavourable symptom. In excessive head-aches, coldness of the extremities is a bad sign.

When the disease continues long, and is very violent, it

often terminates in blindness, an apoplexy, deafness, a *vertigo*, the palsy, or the epilepsy.

In this disease the cool regimen in general is to be observed. The diet ought to consist of such emollient substances as will correct the acrimony of the humours, and keep the body open; as apples boiled in milk, spinage, turnips, and such like. The drink ought to be diluting; as barley-water, infusions of mild mucilaginous vegetables, decoctions of the sudorific woods, &c. The feet and legs ought to be kept warm, and frequently bathed in lukewarm water: the head should be shaved, and bathed with water and vinegar. The patient ought, as much as possible, to keep in an erect posture, and not to lie with his head too low.

When the head-ache is owing to excess of blood, or a hot bilious constitution, bleeding is necessary. The patient may be bled in the jugular vein, and the operation repeated if there be occasion. Cupping also, or the application of leeches to the temples, and behind the ears, will be of service. Afterwards a blistering-plaster may be applied to the neck, behind the ears, or to any part of the head that is most affected. In some cases it will be proper to blister the whole head. In persons of a gross habit, issues, or perpetual blisters, will be of service. The body ought likewise to be kept open by gentle laxatives.

But when the head-ache proceeds from a copious vitiated *serum*, stagnating in the membranes, either within or without the skull, with a dull, heavy, continual pain, which will neither yield to bleeding nor gentle laxatives, then more powerful purgatives are necessary, as pills made of aloes, resin of jalap, or the like. It will also be necessary in this case to blister the whole head, and to keep the back part of the neck open for a considerable time by a perpetual blister.

When the head-ache is occasioned by the stoppage of a running at the nose, the patient should frequently smell to a bottle of volatile salts; he may likewise take snuff, or any thing that will irritate the nose, so as to promote a discharge from it; as the herb mastich, ground ivy, &c.

A *hemicrania*, especially a periodical one, is generally owing to a foulness of the stomach, for which gentle vomits must be administered, as also purges of rhubarb. After the bowels have been sufficiently cleared, chalybeate waters, and such bitters as strengthen the stomach, will be neces-

sary. A periodical head-ache has been cured by wearing a piece of flannel over the forehead during the night.

When the head-ache arises from a vitiated state of the humours, as in the scurvy and venereal disease, the patient, after proper evacuations, must drink freely of the decoction of woods, or the decoction of sarsaparilla, with raisins and liquorice. These, if duly persisted in, will produce very happy effects. When a collection of matter is felt under the skin, it must be discharged by an incision, otherwise it will render the bone carious.

When the head-ache is so intolerable as to endanger the patient's life, or is attended with continual watching and delirium, recourse must be had to opiates. These, after proper evacuations by clysters, or mild purgatives, may be applied both externally and internally. The affected part may be rubbed with Bate's anodyne balsam, or a cloth dipped in it may be applied to the part. The patient may at the same time take twenty drops of laudanum, in a cup of valerian or penny-royal tea, twice or thrice a-day. This is only to be done in case of extreme pain. Proper evacuations ought always to accompany and follow the use of opiates.*

When the patient cannot bear the loss of blood, his feet ought frequently to be bathed in lukewarm water, and well rubbed with a coarse cloth. Cataplasms with mustard or horse-radish ought likewise to be applied to them. This course is peculiarly necessary when the pain proceeds from a gouty humour affecting the head.

When the head-ache is occasioned by great heat, hard labour, or violent exercise of any kind, it may be allayed by cooling medicines; as the saline draught with nitre, and the like.

A little æther dropt into the palm of the hand, and applied to the forehead, will sometimes remove a violent head-ache.

OF THE TOOTH-ACHE.

This disease is so well known, that it needs no description. It has great affinity with the rheumatism, and often succeeds pains of the shoulders and other parts of the body.

* When the pain is very violent, and does not yield to small doses of laudanum, the quantity may be increased. I have known a patient in extreme pain take three hundred drops in twenty-four hours; but such doses ought only to be administered by a person of skill.

It may proceed from obstructed perspiration, or any of the other causes of inflammation. I have often known the tooth-ache occasioned by neglecting some part of the usual coverings of the head, by sitting with the head bare near an open window, or exposing it to a draught of cold air. Food or drink taken either too hot or too cold, is very hurtful to the teeth. Great quantities of sugar, or other sweetmeats, are likewise hurtful. Nothing is more destructive to the teeth than cracking nuts, or chewing any kind of hard substances. Picking the teeth with pins, needles, or any thing that may hurt the enamel with which they are covered, does great mischief, as the tooth is sure to be spoiled whenever the air gets into it. Breeding women are very subject to the tooth-ache, especially during the first three or four months of pregnancy. The tooth-ache often proceeds from scorbutic humours affecting the gums. In this case the teeth are sometimes wasted, and fall out without any considerable degree of pain. The more immediate cause of the tooth-ache is a rotten or *carious* tooth.

In order to relieve the tooth-ache, we must first endeavour to lessen the flux of humours to the part affected. This may be done by mild purgatives, scarifying the gums, or applying leeches to them, and bathing the feet frequently with warm water. The perspiration ought likewise to be promoted, by drinking freely of weak wine-whey, or other diluting liquors, with small doses of nitre. Vomits too have often an exceeding good effect in the tooth-ache. It is seldom safe to administer opiates, or any kind of heating medicines, or even to draw a tooth, till proper evacuations have been premised; and these alone will often effect a cure.

If this fail, and the pain and inflammation still increase, a suppuration may be expected, to promote which a toasted fig should be held between the gum and the cheek; bags filled with boiled camomile-flowers, flowers of elder, or the like, may be applied near the part affected, with as great a degree of warmth as the patient can bear, and renewed as they grow cool; the patient may likewise receive the steams of warm water into his mouth, through an inverted funnel, or by holding his head over the mouth of a porringer filled with warm water. Gargles are likewise of use to promote a discharge. Rob of elder dissolved in small beer

makes a very proper gargle, or an infusion of sage or mulberry leaves.

Such things as promote the discharge of saliva, or cause the patient to spit, are generally of service. For this purpose, bitter, hot, or pungent vegetables may be chewed; as gentian, calamus aromaticus, or pellitory of Spain. Allen recommends the root of *yellow water flower-de-luce* in this case. This root may either be rubbed upon the tooth, or a little of it chewed. Brookes says, he hardly ever knew it fail to cure the tooth-ache. It ought, however, to be used with caution.

Many other herbs, roots, and seeds, are recommended for curing the tooth-ache; as the leaves or roots of millefoil or yarrow chewed, tobacco smoked or chewed, staves-acre, or the seed of mustard chewed, &c. These bitter, hot, and pungent things, by occasioning a greater flow of *saliva*, frequently give ease in the tooth-ache.

Opiates often relieve the tooth-ache. For this purpose, a little cotton wet with laudanum may be held between the teeth; or a piece of sticking-plaster, about the bigness of a shilling, with a bit of opium, in the middle of it, of a size not to prevent the sticking of the other, may be laid on the temporal artery, where the pulsation is most sensible. *De la Motte* affirms, that there are few cases wherein this will not give relief. If there be a hollow tooth, a small pill made of equal parts of camphire and opium, or a small piece of asafœtida, put into the hollow, is often beneficial. When this cannot be had, the hollow tooth may be filled with gum mastich, wax, lead, cork, or any substance that will stick in it, and keep out the external air.

Few applications give more relief in the tooth-ache than blistering-plasters. These may be applied between the shoulders; but they have the best effect when put behind the ears, and made so large as to cover a great part of the lower jaw. Burning the nerve within the affected tooth with a hot iron, has frequently given ease; but this operation ought to be performed with care.

After all, when a tooth is carious, it is often impossible to remove the pain without extracting it; and as a spoiled tooth never becomes sound again, it is prudent to draw it soon, lest it should affect the rest. Tooth-drawing, like bleeding, is very much practised by mechanics, as well as

persons of the medical profession. The operation, however, is not without danger, and ought always to be performed with care. A person unacquainted with the structure of the parts, will be in danger of hurting the jaw-bone, or of drawing a sound tooth instead of a rotten one.* When a sound tooth has been drawn, if it be replaced immediately it will grow in again.

When the tooth-ache returns periodically, and the pain chiefly affects the gums, it may be cured by the bark.

Some pretend to have found great benefit in the tooth-ache, from the application of an artificial magnet to the affected tooth. We shall not attempt to account for its mode of operation; but, if it be found to answer, though only in particular cases, it certainly deserves a trial, as it is attended with no expense, and cannot do any harm. Electricity has likewise been recommended, and particular instruments have been invented for sending a shock through the affected tooth.

Persons who have returns of the tooth-ache at certain seasons, as Spring and Autumn, might often prevent it by taking a purge at these times.

Keeping the teeth clean has no doubt a tendency to prevent the tooth-ache. The best method of doing this is to wash them daily with salt and water, a decoction of the bark, or with cold water alone. All brushing and scraping of the teeth is dangerous, and, unless it be performed with great care, does mischief.

OF THE EAR-ACHE.

This disorder chiefly affects the membrane which lines the inner cavity of the ear called the *meatus auditorius*. It is often so violent as to occasion great restlessness, anxiety, and even delirium. Sometimes epileptic fits, and other convulsive disorders, have been brought on by extreme pain in the ear.

The ear-ache may proceed from any of the causes which produce inflammation. It often proceeds from a sudden suppression of perspiration, or from the head being exposed to cold when covered with sweat. It may also be occa-

* This may always be prevented by the operator striking upon the teeth with any piece of metal, as this never fails to excite the pain in the carious tooth.

sioned by worms, or other insects, getting into the ear, or being bred there, or from any hard body sticking in the ear. Sometimes it proceeds from the translation of morbific matter to the ear. This often happens in the decline of malignant fevers, and occasions deafness, which is generally reckoned a favourable symptom.

When the ear-ache proceeds from insects, or any hard body sticking in the ear, every method must be taken to remove them as soon as possible. The membranes may be relaxed by dropping into the ear oil of sweet almonds, or olive oil. Afterwards the patient should be made to sneeze, by taking snuff, or some strong sternutatory. If this should not force out the body, it must be extracted by art. I have seen insects, which had got into the ear, come out of their own accord upon pouring in oil.

When the pain of the ear proceeds from inflammation, it must be treated like other topical inflammations, by a cooling regimen, and opening medicines. Bleeding at the beginning, either in the arm or jugular vein, or cupping in the neck, will be proper. The ear may likewise be fomented with steams of warm water; or flannel bags filled with boiled mallows and camomile-flowers may be applied to it warm; or bladders filled with warm milk and water. An exceeding good method of fomenting the ear is to apply it close to the mouth of a jug filled with warm water, or a strong decoction of camomile-flowers.

The patient's feet should be frequently bathed in lukewarm water, and he ought to take small doses of nitre and rhubarb, *viz.* a scruple of the former, and ten grains of the latter, three times a-day. His drink may be whey, or decoction of barley and liquorice, with figs or raisins. The parts behind the ear ought frequently to be rubbed with camphorated oil, or a little of the volatile liniment, and a few drops of the camphorated spirit of wine may be put into the ear with wool or cotton. A blister behind the ear, if applied early, will sometimes remove this complaint.

When the inflammation cannot be discussed, a poultice of bread and milk, or roasted onions, may be applied to the ear, and frequently renewed, till the abscess breaks, or can be opened. Afterwards the humours may be diverted from the part by gentle laxatives, blisters, or issues; but the discharge must not be suddenly dried up by any external application.

PAIN OF THE STOMACH, &c.

This may proceed from various causes, as indigestion; wind; the acrimony of the bile; sharp, acrid, or poisonous substances taken into the stomach, &c. It may likewise be occasioned by worms; the stoppage of customary evacuations; or from a translation of gouty matter to the stomach, the bowels, &c.

Women in the decline of life are very liable to pains of the stomach and bowels, especially such as are afflicted wlth hysteric complaints. It is likewise very common to hypochondriac men of a sedentary and luxurious life. In such persons it often proves so extremely obstinate as to baffle all the powers of medicine.

When the pain of the stomach is most violent after eating, there is reason to suspect that it proceeds from some fault either in the digestion or the food. In this case, the patient ought to change his diet, till he finds what kind of food agrees best with his stomach, and should continue chiefly to use it. If a change of diet does not remove the complaint, the patient may take a gentle vomit, and afterwards a dose or two of rhubarb. He ought likewise to take an infusion of camomile flowers, or some other stomachic bitter, either in wine or water. I have often known exercise remove this complaint, especially sailing, or a long journey on horseback, or in a carriage.

When a pain of the stomach proceeds from flatulency, the patient is constantly belching up wind, and feels an uneasy distention of the stomach after meals. This is a most deplorable disease, and is seldom thoroughly cured. In general, the patient ought to avoid all windy diet, and every thing that sours on the stomach, as greens, roots, &c. This rule, however, admits of some exceptions. There are many instances of persons very much troubled with wind, who have received great benefit from eating parched pease, though that grain is generally supposed to be of a windy nature.*

This complaint may likewise be greatly relieved by la-

* These are prepared by steeping or soaking pease in water, and afterwards drying them in a pot or kiln till they burst. They may be used at pleasure.

bour, especially digging, reaping, mowing, or any kind of active employment, by which the bowels are alternately compressed and dilated. The most obstinate case of this kind I ever met with was in a person of a sedentary occupation, whom I advised, after he had tried every kind of medicine in vain, to turn gardener; which he did, and has ever since enjoyed good health.

When a pain of the stomach is occasioned by the swallowing of acrid or poisonous substances, they must be discharged by vomit; this may be excited by butter, oils, or other soft things, which sheathe and defend the stomach from the acrimony of its contents.

When a pain of the stomach proceeds from a translation of gouty matter, warm cordials are necessary, as generous wines, French brandy, &c. Some have drank a whole bottle of brandy or rum in this case in a few hours, without being in the least intoxicated, or even feeling the stomach warmed by it. It is impossible to ascertain the quantity necessary upon these occasions. This must be left to the feelings and discretion of the patient. The safer way, however, is not to go too far. When there is an inclination to vomit, it may be promoted by drinking an infusion of camomile-flowers, or *carduus benedictus.*

If a pain of the stomach proceed from the stoppage of customary evacuations, bleeding will be necessary, especially in sanguine and very full habits. It will likewise be of use to keep the body gently open by mild purgatives, as rhubarb or senna. When this disease affects women in the decline of life, after the stoppage of the *menses*, making an issue in the leg or arm will be of peculiar service.

When the disease is occasioned by worms, they must be destroyed, or expelled by such means as are recommended in the following section.

When the stomach is greatly relaxed, and the digestion bad, which often occasion flatulencies, the elixir of vitriol will be of singular service. Fifteen or twenty drops of it may be taken in a glass of wine or water twice or thrice a-day.

Persons afflicted with flatulency are generally unhappy unless they be taking some purgative medicines; these, though they may give immediate ease, tend to weaken and relax the stomach and bowels, and consequently increase

the disorder. Their best method is to mix purgatives and stomachics together. Equal parts of Peruvian bark and rhubarb may be infused in brandy or wine, and taken in such quantity as to keep the body gently open.

It is difficult to prescribe a general medicine for a disorder arising from such a variety of causes; a plaster may be recommended, which seldom fails to give relief. It is made of any kind of adhesive plaster spread upon leather, with the addition of a dram and a half or two drams of powdered opium, while warm. It should be of a size large enough to cover the whole stomach, and should be allowed to remain on as long as it will stick.

CHAP. XXXV.

OF WORMS.

These are chiefly of three kinds, viz. the *tænia*, or tape-worm; the *teres*, or round and long worm; and the *ascarides*, or round and short worm. There are many other kinds of worms found in the human body; but as they proceed, in a great measure, from similar causes, have nearly the same symptoms, and require almost the same method of treatment as those already mentioned, we shall not spend time in enumerating them.

The tape-worm is white, very long, and full of joints. It is generally bred either in the stomach or small intestines. The round and long worm is likewise bred in the small guts, and sometimes in the stomach. The round and short worms commonly lodge in the *rectum*, or what is called the end gut, and occasion a disagreeable itching about the seat.

The long round worms occasion squeamishness, vomiting, a disagreeable breath, gripes, looseness, swelling of the belly, swoonings, loathing of food, and at other times a voracious appetite, a dry cough, convulsions, epileptic fits, and sometimes a privation of speech. These worms have been known to perforate the intestines, and get into the cavity of the belly. The effects of the tape-worm are nearly the same with those of the long and round, but rather more violent.

Andry says, the following symptoms particularly attend

the *solium*, which is a species of the tape-worm, *viz.* swoonings, privation of speech, and a voracious appetite. The round worms called *ascarides*, besides an itching of the *anus*, cause swoonings, and tenesmus, or an inclination to go to stool.

Causes.—Worms may proceed from various causes; but they are seldom found except in weak and relaxed stomachs, where the digestion is bad. Sedentary persons are more liable to them than the active and laborious. Those who eat great quantities of unripe fruit, or who live much on raw herbs and roots, are generally subject to worms. There seems to be an hereditary disposition in some persons to this disease. I have often seen all the children of a family subject to worms of a particular kind. They seem likewise frequently to be owing to the nurse. Children of the same family nursed by one woman have often worms, when those nursed by another have none.

Symptoms.—The common symptoms of worms are, paleness of the countenance, and, at other times, an universal flushing of the face; itching of the nose; (this, however, is doubtful, as children pick their noses in all diseases;) starting and grinding of the teeth in sleep; swelling of the upper lip; the appetite sometimes bad, at other times quite voracious; looseness; a sour or stinking breath; a hard swelled belly; great thirst; the urine frothy, and sometimes of a whitish colour; griping, or colic pains; an involuntary discharge of *saliva*, especially when asleep; frequent pains of the side, with a dry cough, and unequal pulse; palpitations of the heart; swoonings; drowsiness; cold sweats; palsy; epileptic fits, with many other unaccountable nervous symptoms, which were formerly attributed to witchcraft, or the influence of evil spirits. Small bodies in the excrements, resembling melon or cucumber seeds, are symptoms of the tape-worm. There is no certain symptom of worms but passing them.

I lately saw some very surprising effects of worms in a girl about five years of age, who used to lie for whole hours as if dead. She at last expired, and, upon opening her body, a number of the *teres*, or long round worms, were found in her intestines, which were considerably inflamed; and what anatomists call an *intus-susceptio*, or involving

of one part of the gut within another, had taken place in no less than four different parts of the intestinal canal.*

Medicine.—Though numberless medicines are extolled for expelling and killing worms,† yet no disease more frequently baffles the physician's skill. In general the most proper medicines for their expulsion are strong purgatives; and to prevent their breeding, stomachic bitters, with now and then a glass of good wine.

The best purge for an adult, is jalap and calomel. Five and twenty or thirty grains of the former, with six or seven of the latter, mixed in syrup, may be taken early in the morning for a dose. It will be proper that the patient keep the house all day, and drink nothing cold. The dose may be repeated once or twice a-week, for a fortnight or three weeks. On the intermediate days the patient may take a dram of the filings of tin, twice or thrice a-day, mixed with syrup, honey, or treacle.

Those who do not choose to take calomel may make use of the bitter purgatives; as aloes, hiera picra, tincture of senna and rhubarb, &c.

Oily medicines are sometimes found beneficial for expelling worms. An ounce of salad oil, and a table spoonful of common salt, may be taken in a glass of red port wine thrice a-day, or oftener if the stomach will bear it. But the more common form of using oil is in clysters. Oily clysters, sweetened with sugar or honey, are very efficacious in bringing away the short round worms called *ascarides*, and likewise the *teres*.

The Harrowgate water is an excellent medicine for expelling worms, especially the *ascarides*. As this water is impregnated with sulphur, we may hence infer, that sulphur alone must be a good medicine in this case; which is found to be a fact. Many practitioners give flour of sul-

* That worms exist in the human body there can be no doubt, and that they must sometimes be considered as a disease, is equally certain; but this is not the case so often as people imagine. The idea that worms occasion many diseases, give an opportunity to the professed worm doctors, of imposing upon the credulity of mankind, and doing much mischief. They find worms in every case, and liberally throw in their antidotes, which generally consist of strong drastic purges. I have known these given in delicate constitutions to the destruction of the patient, where there was not the least symptom of worms.

† A medical writer of the present age has enumerated upwards of fifty British plants, all celebrated for killing and expelling worms.

phur in very large doses, and with great success. It should be made into an electuary with honey or treacle, and taken in such quantity as to purge the patient.

Where Harrowgate water cannot be obtained, sea-water may be used, which is far from being a contemptible medicine in this case. If sea-water cannot be had, common salt dissolved in water may be drank. I have often seen this used by country nurses with very good effect. Some flour of sulphur may be taken over-night, and the salt water in the morning.

But worms, though expelled, will soon breed again, if the stomach remain weak and relaxed; to prevent which we would recommend the Peruvian bark. Half a dram of bark in powder may be taken in a glass of red port wine three or four times a-day, after the above medicines have been used. Lime-water is likewise good for this purpose, or a table-spoonful of the chalybeate wine taken twice or thrice a-day. Infusions or decoctions of bitter herbs may likewise be drank; as the infusion of tansy, water-trefoil, camomile-flowers, tops of wormwood, the lesser centaury, &c.

The above directions are intended for adults; but for children the medicines must be more agreeable, and in smaller doses. For a child of four or five years old, six grains of rhubarb, five of jalap, and two of calomel, may be mixed in a spoonful of syrup or honey, and given in the morning. The child should keep the house all day, and take nothing cold. This dose may be repeated twice a-week for three or four weeks. On the intermediate days, the child may take a scruple of powdered tin, and ten grains of æthiops mineral, in a spoonful of treacle, twice a-day. This dose must be increased or diminished according to the age of the patient.

Bisset says, the great bastard black hellebore, or *bear's foot*, is a most powerful vermifuge for the long round worms. He orders the decoction of about a dram of the green leaves, or about fifteen grains of the dried leaves in powder, for a dose to a child between four and seven years of age. This dose is to be repeated two or three times. He adds, that the green leaves made into syrup with coarse sugar, is almost the only medicine he has used for round worms for three years past. Before pressing out the juice, he moistens the bruised leaves with vinegar, which

corrects the medicine. The dose is a tea-spoonful at bed-time, and one or two next morning.

I have frequently known those big bellies which in children are commonly reckoned a sign of worms, quite removed by giving them white soap in their pottage, or other food. Tansy, garlic, and rue, are all good against worms, and may be used various ways. We might here mention many other plants, both for external and internal use, as the cabbage bark, &c. but think the filings of tin with æthiops mineral, and the purges of rhubarb and calomel, are more to be depended on.

Ball's purging vermifuge powder is a very powerful medicine. It is made of equal parts of rhubarb, scammony, and calomel, with as much double-refined sugar as is equal to the weight of all the other ingredients. These must be well mixed together, and reduced to a fine powder. The dose for a child is from ten grains to twenty, once or twice a-week. An adult may take a dram for a dose.*

Parents who would preserve their children from worms, ought to allow them plenty of exercise in the open air; to take care that their food be wholesome and sufficiently solid; and, as far as possible, to prevent their eating raw herbs, roots, or green trashy fruits. It will not be amiss to allow a child who is subject to worms, a glass of red wine after meals; as every thing that braces and strengthens the stomach, is good both for preventing and expelling these vermin.†

In recommending *solid* food, it may be proper to observe, that children should by no means be crammed twice or thrice a-day with meat, but that they should not be fed with *slops*. Meat should be given them only at dinner, and in a moderate quantity, for excess would promote instead of preventing worms. The meat should always be accompanied

* A powder for the tape-worm resembling this, was long kept a secret on the Continent; it was lately purchased by the French King.

† We think it necessary here to warn people of their danger who buy cakes, powders, and other worm medicines, at random from quacks, and give them to their children without proper care. The principal ingredient in most of these medicines is mercury, which is never to be trifled with. I lately saw a shocking instance of the danger of this conduct. A girl who had taken a dose of worm-powder, bought of a travelling quack, went out, and perhaps was so imprudent as to drink cold water during its operation; she immediately swelled, and died on the following day, with all the symptoms of having been poisoned.

with plenty of good bread, and young, tender, and well boiled vegetables, especially in the spring, when these are poured forth from the bosom of the earth in such profusion. They promote the end in view, by keeping the body gently open, without having recourse to purgatives. Ripe fruits are also highly beneficial for this purpose, and are as wholesome as the unripe are pernicious.

When the first symptoms of worms appear, parents should confine themselves to a proper diet and regimen, and not apply to the quack or apothecary for drugs, until they have unequivocal proofs of the nature of the complaint. The danger of advertised nostrums is sufficiently pointed out and exemplified in the preceding note.

CHAP. XXXVI.

OF THE JAUNDICE.

This disease is first observable in the white of the eye, which appears yellow. Afterwards the whole skin puts on a yellow appearance. The urine too is of a saffron hue, and dyes a white cloth, if put into it, of the same colour. There is likewise a species of this disease called the Black Jaundice.

Causes.—The immediate cause of the jaundice is an obstruction of the bile. The remote or occasional causes are, the bites of poisonous animals, as the viper, mad dog, &c.; the bilious or hysteric colic; violent passions, as grief, anger, &c. Strong purges or vomits will likewise occasion the jaundice. Sometimes it proceeds from obstinate agues, or from that disease being prematurely stopped by astringent medicines. In infants, it is often occasioned by the *meconium* not being sufficiently purged off. Pregnant women are very subject to it. It is likewise a symptom in several kinds of fever. Catching cold, or the stoppage of customary evacuations, as the *menses*, the bleeding piles, issues, &c. will occasion the jaundice.

Symptoms.—The patient at first complains of excessive weariness, and has great aversion to every kind of motion. His skin is dry, and he generally feels a kind of itching or pricking pain over the whole body. The stools are of a whitish or clay colour, and the urine, as was observed above,

is yellow. The breathing is difficult, and the patient complains of an unusual load or oppression on his breast. There is a heat on the nostrils, a bitter taste in the mouth, loathing of food, sickness of the stomach, vomiting, flatulency, and other symptoms of indigestion.

If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently, or is complicated with the dropsy or hypochondriac symptoms, it generally proves fatal. The black jaundice is more dangerous than the yellow.

Regimen.—The diet should be cool, light, and diluting, consisting chiefly of ripe fruits and mild vegetables; as apples boiled or roasted, stewed prunes, preserved plums, boiled spinage, &c. Veal or chicken-broth, with light bread, are likewise very proper. Many have been cured by living almost wholly for some days on raw eggs. The drink should be butter-milk, whey sweetened with honey, or decoctions of cool opening vegetables; as marsh-mallow roots, with liquorice, &c.

The patient should take as much exercise as he can bear, either on horseback or in a carriage; walking, running, and even jumping, are likewise proper, provided he can bear them without pain, and there be no symptoms of inflammation. Patients have been often cured of this disease by a long journey, after medicines had proved ineffectual.

Amusements are likewise of great use in the jaundice. The disease is often occasioned by a sedentary life, joined to a dull and melancholy disposition. Whatever therefore tends to promote the circulation, and to cheer the spirits, must have a good effect; as dancing, laughing, singing, &c.

Medicine.—If the patient be young, of a full sanguine habit, and complains of pain in the right side, about the region of the liver, bleeding will be necessary. After this, a vomit must be administered; and if the disease proves obstinate, it may be repeated once or twice. No medicines are more beneficial in the jaundice than vomits, especially where it is not attended with inflammation. Half a dram of ipecacuanha in powder will be a sufficient dose for an adult. It may be wrought off with weak camomile-tea, or lukewarm water. The body must likewise be kept open by taking a sufficient quantity of Castile soap.

Fomenting the parts about the region of the stomach and liver, and rubbing them with a warm hand or flesh brush, are likewise beneficial; but it is still more so for the patient to sit in a bath of warm water up to the breast. He ought to do this frequently, and should continue it as long as his strength will permit.

Many dirty things are recommended for the cure of the jaundice; as lice, millepedes, &c. But these do more harm than good, as people trust to them, and neglect more valuable medicines; besides, they are seldom taken in sufficient quantity to produce any effects. People always expect that such *things* should act as charms, and consequently seldom persist in the use of them. Vomits, purges, fomentations, and exercise, will seldom fail to cure the jaundice when it is a simple disease; and when complicated with the dropsy, a schirrous liver, or other chronic complaints, it is hardly to be cured by any means.

Numberless British herbs are extolled for the cure of this disease. The author of the *Medicina Britannica* mentions near a hundred, all famous for curing the jaundice. The fact is, the disease often goes off of its own accord; in which case, the last medicine is always said to have performed the cure. I have sometimes, however, seen considerable benefit, in a very obstinate jaundice, from a decoction of hempseed. Four ounces of the seed may be boiled in two English quarts of ale, and sweetened with coarse sugar. The dose is half an English pint every morning. It may be continued for eight or nine days.

I have likewise known Harrowgate sulphur water cure jaundice of very long standing. It should be used for some weeks, and the patient must both drink and bathe.

The soluble tartar is a very proper medicine in the jaundice. A dram of it may be taken every night and morning in a cup of tea or water-gruel. If it does not open the body, the dose may be increased.

Persons subject to the jaundice ought to take as much exercise as possible, and to avoid all heating and astringent aliments.

Taking exercise and keeping the body open, is the best and most rational cure for this complaint, which generally arises from an obstruction of the biliary ducts. Though some of the medicines here enumerated may be of great

service, particularly the decoction of hemp-seed, yet exercise is the grand specific, which may be taken with safety and benefit, in every stage of this disorder.

CHAP. XXXVII.

OF THE DROPSY.

The dropsy is a preternatural swelling of the whole body, or some part of it, occasioned by a collection of watery humour. It is distinguished by different names, according to the part affected, as the *anasarca*, or a collection of water under the skin; the *ascites*, or a collection of water in the belly; the *hydrops pectoris*, or dropsy of the breast; the *hydrocephalus*, or dropsy of the brain, &c.

Causes.—The dropsy is often owing to an hereditary disposition. It may likewise proceed from drinking ardent spirits, or other strong liquors. It is true, almost to a proverb, that great drinkers die of a dropsy. The want of exercise is also a very common cause of the dropsy. Hence it is justly reckoned among the diseases of the sedentary. It often proceeds from excessive evacuation, as frequent and copious bleedings, strong purges often repeated, frequent salivations, &c. The sudden stoppage of customary or necessary evacuations, as the *menses*, the hæmorrhoids, fluxes of the belly, &c. may likewise cause a dropsy.

I have known the dropsy occasioned by drinking large quantities of cold, weak, watery liquor, when the body was heated by violent exercise. A low, damp, or marshy situation is likewise a frequent cause of it. Hence it is a common disease in moist, flat, fenny countries. It may also be brought on by a long use of poor watery diet, or of viscous aliment that is hard of digestion. It is often the effect of other diseases, as the jaundice, a schirrus of the liver, a violent ague of long continuance, a diarrhœa, a dysentery, an empyema, or a consumption of the lungs. In short, whatever obstructs the perspiration, or prevents the blood from being duly prepared, may occasion a dropsy.

Symptoms.—The *anasarca* generally begins with a swelling of the feet and ancles towards night, which for some

time disappears in the morning. In the evening the parts, if pressed with the finger, will pit. The swelling gradually ascends, and occupies the trunk of the body, the arms, and the head. Afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great; the body is bound, and the perspiration is greatly obstructed. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough. This last is generally a fatal symptom, as it shews the lungs are affected.

In an *ascites*, besides the above symptoms, there is a swelling of the belly, and often a fluctuation, which may be perceived by striking the belly on one side, and laying the palm of the hand on the opposite. This may be distinguished from a *tympany* by the weight of the swelling, as well as by the fluctuation. When the *anasarca* and *ascites* are combined, the case is very dangerous. Even a simple *ascites* seldom admits of a radical cure. Almost all that can be done is, to let off the water by tapping, which seldom affords more than a temporary relief.

When the disease comes suddenly on, and the patient is young and strong, there is reason to hope for a cure, especially if medicine be given early. But if the patient be old, has led an irregular or a sedentary life, or if there be reason to suspect that the liver, lungs, or any of the viscera are unsound, there is great reason to fear that the consequences will prove fatal.

Regimen.—The patient must abstain, as much as possible, from all drink, especially weak and watery liquors, and must quench his thirst with mustard-whey, or acids, as juice of lemons, oranges, sorrel, or such like. His aliment ought to be dry, of a stimulating and diuretic quality, as toasted bread, the flesh of birds, or other wild animals, roasted; pungent and aromatic vegetables, as garlic, mustard, onions, cresses, horse-radish, rocambole, shalot, &c. He may also eat sea-biscuit dipped in wine or a little brandy. This is not only nourishing, but tends to quench thirst. Some have been actually cured of a dropsy by a total abstinence from all liquids, and living entirely upon such things as are mentioned above. If the patient must have drink, the Spa-water, or Rhenish wine, with diuretic medicines infused in it, are the best.

Exercise is of the greatest importance in a dropsy. If

the patient be able to walk, dig, or the like, he ought to continue these exercises as long as he can. If he be not able to walk or labour, he must ride on horseback, or in a carriage, and the more violent the motion so much the better, provided he can bear it. His bed ought to be hard, and the air of his apartment warm and dry. If he live in a damp country, he ought to be removed into a dry one, and, if possible, into a warmer climate. In a word, every method should be taken to promote the perspiration, and to brace the solids. For this purpose it will likewise be proper to rub the patient's body two or three times a-day with a hard cloth, or the flesh brush; and he ought constantly to wear flannel next his skin.

Medicine.—If the patient be young, his constitution good, and the disease has come on suddenly, it may generally be removed by strong vomits, brisk purges, and such medicines as promote a discharge by sweat and urine. For an adult, half a dram of ipecacuanha in powder, and half an ounce of oxymel of squills, will be a proper vomit. This may be repeated as often as is found necessary, three or four days intervening between the doses. The patient must not drink much after taking the vomit, otherwise he destroys its effect. A cup or two of camomile-tea will be sufficient to work it off.

Between each vomit, on one of the intermediate days, the patient may take the followiug purge: Jalap in powder half a dram, cream of tartar two drams, calomel six grains. These may be made into a bolus with a little syrup of pale roses, and taken early in the morning. The less the patient drinks after it the better. If he be much griped, he may now and then take a cup of chicken-broth.

The patient may likewise take every night at bed-time the following bolus: To four or five grains of camphor add one grain of opium, and as much syrup of orange-peel as is sufficient to make them into a bolus. This will generally promote a gentle sweat, which should be encouraged by drinking now and then a small cup of wine-whey, with a tea-spoonful of the spirits of hartshorn in it. A tea-cupful of the following diuretic infusion may likewise be taken every four or five hours through the day: Take juniper-berries, mustard-seed and horse-radish, of each half an ounce, ashes of broom half a pound; infuse them in a quart of

Rhenish wine or strong ale for a few days, and afterwards strain off the liquor. Such as cannot take this infusion, may use the decoction of seneka-root, which is both diuretic and sudorific. I have known an obstinate *anasarca* cured by an infusion of the ashes of broom in wine.

The above course will often cure an incidental dropsy, if the constitution be good; but when the disease proceeds from a bad habit, or an unsound state of the viscera, strong purges and vomits are not to be ventured upon. In this case the safer course is to palliate the symptoms by the use of such medicines as promote the secretions, and to support the patient's strength by warm and nourishing cordials.

The secretion of urine may be greatly promoted by nitre. Brookes says, he knew a young woman who was cured of a dropsy by taking a grain of nitre every morning in a draught of ale, after she had been given over as incurable. The powder of squills is likewise a good diuretic. Six or eight grains of it, with a scruple of nitre, may be given twice a-day in a glass of strong cinnamon-water. Ball says, a large spoonful of unbruised mustard-seed taken every night and morning, and drinking half an English pint of the decoction of the tops of green broom after it, has performed a cure after other powerful medicines had proved ineffectual.

I have sometimes seen good effects from cream of tartar in this disease. It promotes the discharges by stool and urine, and will at least palliate, if it does not perform a cure. The patient may begin by taking an ounce every second or third day, and may increase the quantity to two or even to three ounces, if the stomach will bear it. This quantity is not, however, to be taken at once, but divided into three or four doses.

To promote perspiration, the patient may use the decoction of seneka-root, as directed above; or he may take two table-spoonfuls of Mindererus's spirit in a cup of wine-whey three or four times a-day. To promote a discharge of urine, the following infusion of the London hospitals will likewise be beneficial:

Take of zedoary-root two drams; dried squills, rhubarb, and juniper-berries bruised, of each a dram; cinnamon in powder, three drams; salt of wormwood, a dram and a half; infuse in an English pint and a half of old hock wine, and

when fit for use filter the liquor. A wine glass of it may be taken three or four times a-day.

In the *anasarca* it is usual to scarify the feet and legs. By this means the water is often discharged; but the operator must be cautious not to make the incisions too deep; they ought barely to pierce through the skin, and especial care must be taken, by spirituous fomentations and proper digestives, to prevent a gangrene.

In an *ascites*, when the disease does not evidently and speedily give way to purgatives and diuretic medicines, the water ought to be let off by tapping. This is a very simple and safe operation, and would often succeed, if it were performed in due time; but if it be delayed till the humours are vitiated, or the bowels spoiled, by long soaking in water, it can hardly be expected that any permanent relief will be procured.*

After the evacuation of the water, the patient is to be put on a course of strengthening medicines; as the Peruvian bark; the elixir of vitriol; warm aromatics, with a due proportion of rhubarb, infused in wine, and such like. His diet ought to be dry and nourishing, such as is recommended in the beginning of the Chapter; and he should take as much exercise as he can bear without fatigue. He should wear flannel, or rather fleecy hosiery, next his skin, and make daily use of the flesh-brush.

CHAP. XXXVIII.

OF THE GOUT.

There is no disease which shews the imperfection of medicine, or sets the advantages of temperance and exercise in a stronger light, than the gout. Excess and idleness are the true sources from whence it originally sprung, and all who would avoid it must be *active* and *temperate.*

Though idleness and intemperance are the principal

* The very name of an operation is dreadful to most people, and they wish to try every thing before they have recourse to it. This is the reason why tapping so seldom succeeds to our wish. I had a patient who was regularly tapped once a month for several years, and who used to eat her dinner as well after the operation as if nothing had happened. She died at last, rather worn out by age than by the disease.

causes of the gout, yet many other things may contribute to bring on the disorder in those who are not, and to induce a paroxysm in those who are subject to it; as intense study; excess of venery; too free an use of acidulated liquors; night-watching; grief or uneasiness of mind; an obstruction or defect of any of the customary discharges, as the *menses*, sweating of the feet, perspiration, &c.

Symptoms.—A fit of the gout is generally preceded by indigestion, drowsiness, belching of wind, a slight headache, sickness, and sometimes vomiting. The patient complains of weariness and dejection of spirits, and has often a pain in the limbs, with a sensation as if wind or cold water were passing down the thigh. The appetite is often remarkably keen a day or two before the fit, and there is a slight pain in passing urine, and frequently an involuntary shedding of tears. Sometimes these symptoms are much more violent, especially upon the near approach of the fit; and it has been observed, that as is the fever which ushers in the gout, so will the fit be; if the fever be short and sharp, the fit will be so likewise; if it be feeble, long, and lingering, the fit will be such also. But this observation can only hold with respect to very regular fits of the gout.

The regular gout generally makes its attack in the Spring or beginning of Winter, in the following manner: About two or three in the morning, the patient is seized with a pain in his great toe, sometimes in the heel, and at other times in the ancle or calf of the leg. This pain is accompanied with a sensation as if cold water were poured upon the part, which is succeeded by a shivering, with some degree of fever. Afterwards the pain increases, and fixing among the small bones of the foot, the patient feels all the different kinds of torture, as if the part were stretched, burnt, squeezed, gnawed, or torn in pieces. The part at length becomes so exquisitely sensible, that the patient cannot bear to have it touched, or even suffer any person to walk across the room.

The patient is generally in exquisite torture for twenty-four hours, from the time of the coming on of the fit: he then becomes easier, the part begins to swell, appears red, and is covered with a little moisture. Towards morning he drops asleep, and generally falls into a gentle breathing sweat. This terminates the first paroxysm, a number of

which constitutes a fit of the gout; which is longer or shorter according to the patient's age, strength, the season of the year, and the disposition of the body to this disease.

The patient is always worse towards night, and easier in the morning. The paroxysms, however, generally grow milder every day, till at length the disease is carried off by perspiration, urine, and the other evacuations. In some patients this happens in a few days; in others, it requires weeks, and in some months, to finish the fit. Those whom age and frequent fits of the gout have greatly debilitated, seldom get free from it before the approach of Summer, and sometimes not till it be pretty far advanced.

Regimen.—As there are no medicines yet known that will cure the gout, we shall confine our observations chiefly to regimen, both in and out of the fit.

In the fit, if the patient be young and strong, his diet ought to be thin and cooling, and his drink of a diluting nature; but where the constitution is weak, and the patient has been accustomed to live high, this is not a proper time to retrench. In this case he must keep nearly to his usual diet, and should take frequently a cup of strong negus, or a glass of generous wine. Wine-whey is a very proper drink in this case, as it promotes the perspiration without greatly heating the patient. It will answer this purpose better if a tea-spoonful of *sal volatile oleosum*, or spirits of hartshorn, be put into a cup of it twice a-day. It will likewise be proper to give at bed-time a tea-spoonful of the volatile tincture of *guaiacum*, in a large draught of warm wine-whey. This will greatly promote perspiration through the night.

As the most safe and efficacious method of discharging the gouty matter is by perspiration, this ought to be kept up by all means, especially in the affected part. For this purpose the leg and foot should be wrapt in soft flannel, fur, or wool. The last is most readily obtained, and seems to answer the purpose better than any thing else. The people of Lancashire look upon wool as a kind of specific in the gout. They wrap a great quantity of it about the leg and foot affected, and cover it with a skin of soft dressed leather. This they suffer to continue for eight or ten days, and sometimes for a fortnight or three weeks, or longer, if the pain does not cease. I never knew any external application answer so well in the gout. I have often seen it applied when

the swelling and inflammation were very great, with violent pain, and have found all these symptoms relieved by it in a few days. The wool which they use is generally greased, and carded or combed. They choose the softest which can be had, and seldom or never remove it till the fit be entirely gone off.

The patient ought likewise to be kept quiet and easy during the fit. Every thing that affects the mind disturbs the paroxysm, and tends to throw the gout upon the nobler parts. All external applications that repel the matter are to be avoided as death. They do not cure the disease, but remove it from a safer to a more dangerous part of the body, where it often proves fatal. A fit of the gout is to be considered as Nature's method of removing something that might prove destructive to the body, and all that we can do with safety is to promote her intentions, and to assist her in expelling the enemy in her own way. Evacuations by bleeding, stool, &c. are likewise to be used with caution; they do not remove the cause of the disease, and sometimes by weakening the patient, prolong the fit; but where the constitution is able to bear it, it will be of use to keep the body gently open by diet, or very mild laxative medicines.

Many things will indeed shorten a fit of the gout, and some will drive it off altogether; but nothing has yet been found which will do this with safety to the patient. In pain we eagerly grasp at any thing that promises immediate ease, and even hazard life itself for a temporary relief. This is the true reason why so many infallible remedies have been proposed for the gout, and why such numbers have lost their lives by the use of them. Notwithstanding the acknowledged and frequently experienced danger of tampering with the gout, such is the effect of intense pain, that I never met with more than two patients who could bear their sufferings with rational composure, or, what is the same thing, without frantic attempts to alleviate them. When the seat of the complaint is in torture, a promise to afford relief, though made by the greatest impostor upon earth, is listened to; and present ease is sought for, at the risk of any future consequences. It is not many years since some persons of the first rank in the kingdom fell victims to the deceptions of a foreign quack, who soothed their impatience of pain, amused them with the charm of fancied recovery,

and rendered momentary ease the fatal prelude to inevitable death. It would be as prudent to stop the small-pox from rising, and to drive them into the blood, as to attempt to repel the gouty matter after it has been thrown upon the extremities. The latter is as much an effort of Nature to free herself from an offending cause as the former, and ought equally to be promoted.

When the pain, however, is very great, and the patient is restless, thirty or forty drops of laudanum, more or less according to the violence of the symptoms, may be taken at bed-time. This will ease the pain, procure rest, promote perspiration, and forward the crisis of the disease.

After the fit is over, the patient ought to take a gentle dose or two of the bitter tincture of rhubarb, or some other warm stomachic purge. He should also drink a weak infusion of stomachic bitters in small wine or ale, as the Peruvian bark with cinnamon, Virginian snake-root, and orange-peel. The diet at this time should be light but nourishing, and gentle exercise ought to be taken on horseback, or in a carriage.

Out of the fit, it is in the patient's power to do many things towards preventing a return of the disorder, or rendering the fit, if it should return, less severe. This, however, is not to be attempted by medicine. I have frequently known the gout kept off for several years by the Peruvian bark and other astringent medicines; but in all the cases where I had occasion to see this tried, the persons died suddenly, and to all appearance for want of a regular fit of the gout. One would be apt, from hence, to conclude, that a fit of the gout, to some constitutions, in the decline of life, is rather salutary than hurtful.

Thongh it may be dangerous to stop a fit of the gout by medicine, yet if the constitution can be so changed by diet and exercise, as to lessen or totally prevent its return, there certainly can be no danger in following such a course. It is well known, that the whole habit may be so altered by a proper regimen, as quite to eradicate this disease; and those only who have sufficient resolution to persist in such a course have reason to expect a cure.

The course which we would recommend for preventing the gout, is as follows: In the first place, *universal temper-*

ance. In the next place, *sufficient exercise.** By this we do not mean sauntering about in an indolent manner, but labour, sweat, and toil. These only can render the humours wholesome, and keep them so. Going early to bed, and rising betimes, are also of great importance. It is likewise proper to avoid night studies, and intense thinking. The supper should be light, and taken early. The use of milk, gradually increased, till it becomes the principal part of diet, is particularly recommended. All strong liquors, especially generous wines and sour punch, are to be avoided.

We would likewise recommend some doses of *magnesia alba* and rhubarb to be taken every Spring and Autumn; and afterwards a course of stomachic bitters, as tansy or water-trefoil tea, an infusion of gentian and camomile flowers, or a decoction of burdock-root, &c. Any of these, or an infusion of any wholesome bitter that is more agreeable to the patient, may be drank for two or three weeks in March and October twice a-day. An issue or perpetual blister has a great tendency to prevent the gout. If these were more generally used in the decline of life, they would not only often prevent the gout, but also other chronic maladies. Such as can afford to go to Bath, will find great benefit from bathing and drinking the water. It both promotes digestion, and invigorates the habit.

Though there is little room for medicine during a regular fit of the gout, yet when it leaves the extremities, and falls on some of the internal parts, proper applications to recall and fix it become absolutely necessary. When the gout affects the head, the pain of the joints ceases, and the swelling disappears, while either severe head-ache, drowsiness, trembling, giddiness, convulsions, or delirium, come on. When it seizes the lungs, great oppression, with cough, and difficulty of breathing, ensue. If it attacks the stomach, extreme sickness, vomiting, anxiety, pain in the epigastric region, and total loss of strength, will succeed.

When the gout attacks the head or lungs, every method must be taken to fix it in the feet. They must be frequently bathed in warm water, and acrid cataplasms applied to the

* Some make a secret of curing the gout by *muscular exercise*. This secret, however, is as old as Celsus, who strongly recommends that mode of cure: and whoever will submit to it in the fullest extent, may expect to reap solid and permanent advantages.

soles. Blistering-plasters ought likewise to be applied to the ancles, or calves of the legs. Bleeding in the feet or ancles is also necessary, and warm stomachic purges. The patient ought to keep in bed for the most part, if there be any signs of inflammation, and should be very careful not to catch cold.

If it attacks the stomach, with a sense of cold, the most warm cordials are necessary; as strong wine boiled up with cinnamon or other spices; cinnamon-water; peppermint-water; and even brandy or rum.* The patient should keep his bed, and endeavour to promote a sweat by drinking warm liquors; and if he should be troubled with a nausea, or inclination to vomit, he may drink camomile-tea, or any thing that will make him vomit freely.

When the gout attacks the kidneys, and imitates gravel-pains, the patient ought to drink freely of a decoction of marsh-mallows, and to have the parts fomented with warm water. An emollient clyster ought likewise to be given, and afterwards an opiate. If the pain be very violent, twenty or thirty drops of laudanum may be taken in a cup of the decoction.

Persons who have had the gout should be very attentive to any complaints that may happen to them about the time when they have reason to expect a return of the fit. The gout imitates many other disorders, and by being mistaken for them, and treated improperly, is often diverted from its regular course, to the great danger of the patient's life.

Those who never had the gout, but who, from their constitution or manner of living, have reason to expect it, ought likewise to be very circumspect with regard to its first approach. If the disease, by wrong conduct or improper medicines, be diverted from its proper course, the miserable patient has a chance to be ever after tormented with head-aches, coughs, pains of the stomach and intestines; and to fall at last a victim to its attack upon some of the more noble parts.

OF THE RHEUMATISM.

This disease has often a resemblance to the gout. It generally attacks the joints with exquisite pain, and is some-

* Ether is found to be an efficacious remedy in this case.

times attended with inflammation and swelling. It is most common in the spring, and towards the end of autumn. It is usually distinguished into acute and chronic; or the rheumatism with and without a fever.

Causes.—The causes of a rheumatism are frequently the same as those of an inflammatory fever, viz. an obstructed perspiration, the immoderate use of strong liquors, and the like. Sudden changes of the weather, and all quick transitions from heat to cold, are very apt to occasion the rheumatism. The most extraordinary case of a rheumatism that I ever saw, where almost every joint of the body was distorted, was a man who used to work one part of the day by the fire and the other part of it in the water. Very obstinate rheumatisms have likewise been brought on, by persons not accustomed to it allowing their feet to continue long wet. The same effects are often produced by wet clothes, damp beds, sitting or lying on the damp ground, travelling in the night, &c.

The rheumatism may likewise be occasioned by excessive evacuations, or the stoppage of customary discharges. It is often the effect of chronic diseases, which vitiate the humours; as the scurvy, the *lues venerea*, obstinate autumnal agues, &c.

The rheumatism prevails in cold, damp, marshy countries. It is most common among the poorer sorts of peasants, who are ill clothed, live in low damp houses, and eat coarse and unwholesome food, which contains but little nourishment, and is not easily digested.

Symptoms. — The *acute* rheumatism commonly begins with weariness, shivering, a quick pulse, restlessness, thirst, and other symptoms of fever. Afterwards the patient complains of flying pains, which are increased by the least motion. These at length fix in the joints, which are often affected with swelling and inflammation. If blood be let in this disease, it has generally the same appearance as in the pleurisy.

In this kind of rheumatism the treatment of the patient is nearly the same as in an acute or inflammatory fever. If he be young and strong, bleeding is necessary, which may be repeated according to the exigencies of the case. The body ought likewise to be kept open by emollient clysters, or cool opening liquors; as decoctions of tamarinds, cream

of tartar, whey, senna-tea, and the like. The diet should be light and in small quantity, consisting chiefly of roasted apples, groat-gruel, or weak chicken-broth. After the feverish symptoms have abated, if the pain still continues, the patient must keep his bed, and take such things as promote perspiration; as wine-whey, with *spiritus mindereri*, &c. He may likewise take, for a few nights, at bed-time, in a cup of wine-whey, a dram of the cream of tartar, and half a dram of gum guaiacum in powder.

Warm bathing, after proper evacuations, has often an exceeding good effect. The patient may either be put into a bath of warm water, or have cloths wrung out of it applied to the parts affected. Great care must be taken that he do not catch cold after bathing.

The *chronic* rheumatism is seldom attended with any considerable degree of fever, and is generally confined to some particular part of the body, as the shoulders, the back, or the loins. There is seldom any inflammation or swelling in this case. Persons in the decline of life are most subject to the chronic rheumatism. In such patients it often proves extremely obstinate, and sometimes incurable.

In this kind of rheumatism the regimen should be nearly the same as in the acute. Cool and diluting diet, consisting chiefly of vegetable substances, as stewed prunes, codlled apples, currants or gooseberries boiled in milk, is most proper. Arbuthnot says, 'If there be a specific in aliment for the rheumatism, it is certainly whey;' and adds, 'That he knew a person subject to this disease, who could never be cured by any other method but a diet of whey and bread.' He likewise says, 'That cream of tartar in water-gruel, taken for several days, will ease rheumatic pains considerably.' This I have often experienced, but found it always more efficacious when joined with gum guaiacum, as already directed. In this case the patient may take the dose formerly mentioned twice a-day, and likewise a tea-spoonful of the volatile tincture of gum guaiacum at bed-time in wine-whey.

This course may be continued for a week, or longer, if the case proves obstinate, and the patient's strength will permit. It ought then to be omitted for a few days, and repeated again. At the same time leeches, or a blistering-plaster, may be applied to the part affected. What I have

generally found to answer better than either of these, in obstinate fixed rheumatic pains, is the *warm plaster*. I have likewise known a plaster of Burgundy pitch worn for some time on the part affected give great relief in rheumatic pains. My ingenious friend, Dr Alexander of Edinburgh, says, he has frequently cured very obstinate rheumatic pains, by rubbing the parts affected with tincture of cantharides. When the common tincture did not succeed, he used it of a double or treble strength. Cupping upon the part affected is likewise often very beneficial, and so is the application of leeches.

Though this disease may not seem to yield to medicines for some time, yet they ought still to be persisted in. Persons who are subject to frequent returns of the rheumatism will often find their account in using medicines, whether they be immediately affected with the disease or not. The chronic rheumatism is similar to the gout in this respect, that the most proper time for using medicines to extirpate it, is when the patient is most free from the disorder.

To those who can afford the expence, I would recommend the warm baths of Buxton or Matlock in Derbyshire. These have often, to my knowledge, cured very obstinate rheumatisms, and are always safe either in or out of the fit. When the rheumatism is complicated with scorbutic complaints, which is not seldom the case, the Harrowgate waters, and those of Moffat, are proper. They should both be drank and used as a warm bath.

There are several of our own domestic plants which may be used with advantage in the rheumatism. One of the best is the white *mustard*. A table-spoonful of the seed of this plant may be taken twice or thrice a-day in a glass of water or small wine. The water-trefoil is likewise of great use in this complaint. It may be infused in wine or ale, or drank in form of tea. The ground-ivy, camomile, and several other bitters, are also beneficial, and may be used in the same manner. No benefit however is to be expected from these, unless they be taken for a considerable time. Excellent medicines are often despised in this disease, because they do not perform an immediate cure; whereas nothing would be more certain than their effect, were they duly persisted in. Want of perseverance in the use of medicines is one reason why chronic diseases are so seldom cured.

Cold bathing, especially in salt water, often cures the rheumatism. We would also recommend riding on horseback, and wearing flannel next the skin. Issues are likewise very proper, especially in chronic cases. If the pain affects the shoulders, an issue may be made in the arm; but if it affects the loins, it should be put into the leg or thigh.

Persons afflicted with the scurvy are very subject to rheumatic complaints. The best medicines in this case are bitters and mild purgatives. These may either be taken separately or together, as the patient inclines. An ounce of Peruvian bark, and half an ounce of rhubarb in powder, may be infused in a bottle of wine; and one, two, or three wine glasses of it taken daily, as shall be found necessary for keeping the body gently open. In cases where the bark itself proves sufficiently purgative, the rhubarb may be omitted.

Such as are subject to frequent attacks of the rheumatism ought to make choice of a dry, warm situation, to avoid the night-air, wet clothes, and wet feet, as much as possible. Their clothing should be warm, and they should wear flannel next their skin, and make frequent use of the flesh-brush.

Wearing fleecy hosiery next the skin, is the best and most effectual means for the prevention and cure of rheumatism. In marshy countries, where the inhabitants are subject to ague and rheumatism, the use of this article of dress cannot be too strongly recommended; in such situations, persons in good circumstances could not exert their beneficence to better purpose, than in supplying their poor neighbours with so cheap and simple a preservative.

CHAP. XXXIX.

OF THE SCURVY.

This disease prevails chiefly in cold northern countries, especially in low damp situations, near large marshes, or great quantities of stagnating water. Sedentary people, of a dull melancholy disposition, are most subject to it. It proves often fatal to sailors on long voyages, particularly in ships that are not properly ventilated, have many people on board, or where cleanliness is neglected.

It is not necessary to mention the different species into

which this disease has been divided, as they differ from one another chiefly in degree. What is called the *land scurvy*, however, is seldom attended with those highly putrid symptoms which appear in patients who have been long at sea, and which, we presume, are rather owing to confined air, want of exercise, and the unwholesome food eaten by sailors on long voyages, than to any specific difference in the disease.

Causes.—The scurvy is occasioned by cold moist air, by the long use of salted or smoke-dried provisions, or any kind of food that is hard of digestion, and affords little nourishment. It may also proceed from the suppression of customary evacuations, as the *menses*, the hæmorrhoidal flux, &c. It is sometimes owing to an hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great tendency both to excite and aggravate this disease. The same observation holds with regard to neglect of cleanliness, bad clothing, the want of proper exercise, confined air, unwholesome food, or any disease which greatly weakens the body, or vitiates the humours.

Symptoms.—This disease may be known by unusual weariness, heaviness, and difficulty of breathing, especially after motion; rottenness of the gums, which are apt to bleed on the slightest touch; a stinking breath; frequent bleeding at the nose; crackling of the joints; difficulty of walking; sometimes a swelling and sometimes a falling away of the legs, on which there are livid, yellow, or violet-coloured spots; the face is generally of a pale or leaden colour. As the disease advances, other symptoms come on; as rottenness of the teeth; hæmorrhages, or discharges of blood from different parts of the body, foul obstinate ulcers, pains in various parts, especially about the breast; dry scaly eruptions all over the body, &c. At last a wasting or hectic fever comes on, and the miserable patient is often carried off by a dysentery, a diarrhœa, a dropsy, the palsy, fainting fits, or a mortification of some of the bowels.

Cure.—We know no way of curing this disease but by pursuing a plan directly opposite to that which brings it on. It proceeds from a vitiated state of the humours, occasioned by errors in diet, air, or exercise; and this cannot be removed but by a proper attention to these important articles.

If the patient has been obliged to breathe a cold, damp,

or confined air, he should be removed as soon as possible to a dry, open, and moderately warm one. If there is reason to believe that the disease proceeds from a sedentary life, or depressing passions, as grief, fear, &c. the patient must take daily as much exercise in the open air as he can bear, and his mind should be diverted by cheerful company and other amusements. Nothing has a greater tendency either to prevent or remove this disease, than constant cheerfulness and good humour. But this, alas! is seldom the lot of persons afflicted with the scurvy; they are generally surly, peevish, and morose.

When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables; as oranges, apples, lemons, limes, tamarinds, water-cresses, scurvy-grass, brook-lime, &c. The use of these, with milk, pot-herbs, new bread, and fresh beer or cyder, will seldom fail to remove a scurvy of this kind, if taken before it be too far advanced; but to have this effect, they must be persisted in for a considerable time. When fresh vegetables cannot be obtained, pickled or preserved ones may be used; and where these are wanting, recourse must be had to the chymical acids. All the patient's food and drink should in this case be sharpened with cream of tartar, elixir of vitriol, vinegar, or the spirit of sea-salt.

These things, however, will more certainly prevent than cure the scurvy, for which reason sea-faring people, especially in long voyages, ought to lay in plenty of them. Cabbages, onions, gooseberries, and many other vegetables, may be kept a long time by *pickling*, *preserving*, &c.; and when these fail, the chymical acids recommended above, which will keep for any length of time, may be used. We have reason to believe, if ships were well ventilated, had got store of fruits, greens, cyder, &c. laid in, and if proper regard were paid to cleanliness and warmth, that sailors would be the most healthy people in the world, and would seldom suffer either from the scurvy or putrid fevers, which are so fatal to that useful class of men: but it is too much the temper of such people to despise all precaution; they will not think of any calamity till it overtakes them, when it is too late to ward off the blow.

It must indeed be owned, that many of them have it not in their power to make the provision we are speaking of;

but in this case it is the duty of their employers to make it for them; and no man ought to engage in a long voyage without having these articles secured.

I have often seen very extraordinary effects in the land-scurvy from a milk diet. This preparation of Nature is a mixture of animal and vegetable properties, which of all others is the most fit for restoring a decayed constitution, and removing that particular acrimony of the humours, which seems to constitute the very essence of the scurvy, and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour with greediness flesh and fermented liquors, while milk is only deemed fit for their hogs.

The most proper drink in the scurvy is whey or butter milk. When these cannot be had, sound cyder, perry, or spruce-beer, may be used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce-fir, is likewise proper. It may be drank in the quantity of an English pint twice a-day. Tar-water may be used for the same purpose, or decoctions of any of the mild mucilaginous vegetables; as sarsaparilla, marsh-mallow roots, &c. Infusions of the bitter plants, as ground ivy, the lesser centaury, marsh-trefoil, &c. are likewise beneficial. I have seen the peasants in some parts of Britain express the juice of the last mentioned plant, and drink it with good effect in these foul scorbutic eruptions with which they are often troubled in the spring season.

Harrowgate-water is certainly an excellent medicine in the land-scurvy. I have often seen patients who had been reduced to the most deplorable condition by this disease, greatly relieved by drinking the sulphur-water, and bathing in it. The chalybeate-water may also be used with advantage, especially with a view to brace the stomach after drinking the sulphur-water, which, though it sharpens the appetite, never fails to weaken the power of digestion.

A slight degree of scurvy may be carried off by frequently sucking a little of the juice of a bitter orange or a lemon. When the disease affects the gums only, this practice, if continued for some time, will generally carry it off. We would, however, recommend the bitter orange as greatly preferable to lemon; it seems to be as good a medicine,

and is not near so hurtful to the stomach. Perhaps our own sorrel may be little inferior to either of them.

All kinds of salad are good in the scurvy, and ought to be eaten very plentifully, as spinage, lettuce, parsley, celery, endive, radish, dandelion, &c. It is amazing to see how soon fresh vegetables in the spring cure the brute animals of any scab or foulness which is upon their skins. It is reasonable to suppose that their effects would be as great upon the human species, were they used in proper quantity for a sufficient length of time.

I have sometimes seen good effects in scorbutic complaints of very long standing, from the use of a decoction of the roots of water-dock. It is usually made by boiling a pound of the fresh root in six English pints of water, till about one third of it be consumed. The dose is from half a pint to a whole pint of the decoction every day. But in all the cases where I have seen it prove beneficial, it was made much stronger, and drank in large quantities. The safest way, however, is for the patient to begin with small doses, and increase them both in strength and quantity, as he finds his stomach will bear it. It must be used for a considerable time. I have known some take it for many months, and have been told of others who had used it for several years, before they were sensible of any benefit, but who nevertheless were cured by it at length.

The leprosy, which was so common in this country long ago, seems to have been near a-kin to the scurvy. Perhaps its appearing so seldom now, may be owing to the inhabitants of Britain eating more vegetable food than formerly, living more upon tea and other diluting diet, using less salted meat, being more cleanly, better lodged and clothed, &c.— For the cure of this disease we would recommend the same course of diet and medicine as in the scurvy.

OF THE SCROPHULA, OR KING'S-EVIL.

This disease chiefly affects the glands, especially those of the neck. Children, and young persons of a sedentary life, are very subject to it. It is one of those diseases which may be removed by proper regimen, but seldom yields to medicine. The inhabitants of cold, damp, marshy countries, are most liable to the scrophula.

Causes.—This disease may proceed from an hereditary taint, infection, a scrophulous nurse, &c. Children who have the misfortune to be born of sickly parents, whose constitutions have been greatly injured by the pox, or other chronic diseases, are apt to be affected by the scrophula. It may likewise proceed from such diseases as weaken the habit or vitiate the humours, as the small-pox, measles, &c. External injuries, as blows, bruises, and the like, sometimes produce scrophulous ulcers; but we have reason to believe, when this happens, that there has been a predisposition in the habit to this disease. In short, whatever tends to vitiate the humours or relax the solids, paves the way to the scrophula; as the want of proper exercise, too much heat or cold, confined air, unwholesome food, bad water, the long use of poor, weak, watery aliments, the neglect of cleanliness, &c. Nothing tends more to induce this disease in children, than allowing them to continue long wet.*

Symptoms.—At first, small knots appear under the chin, or behind the ears, which gradually increase in number and size, till they form one large hard tumour. This often continues for a long time without breaking, and when it does break, it only discharges a thin *sanies*, or watery humour. Other parts of the body are likewise liable to its attack, as the arm-pits, groins, feet, hands, eyes, breasts, &c. Nor are the internal parts exempt from it. It often affects the lungs, liver, or spleen; and I have frequently seen the glands of the mysentery greatly enlarged by it.

Those obstinate ulcers which break out upon the feet and hands with swelling, and little or no redness, are of the scrophulous kind. They seldom discharge good matter, and are exceedingly difficult to cure. The *white swellings* of the joints seem likewise to be of this kind. They are with difficulty brought to a suppuration, and when opened they only discharge a thin ichor. There is not a more general symptom of the scrophula than a swelling of the upper lip and nose. It sometimes begins in a toe or finger, which continues long swelled, with no great degree of pain, till the bone becomes carious.

Regimen.—As this disease proceeds, in a great measure, from a relaxation, the diet ought to be generous and nou-

* The scrophula, as well as the rickets, is found to prevail in large manufacturing towns, where people live gross, and lead sedentary lives.

rishing, but at the same time light and of easy digestion; as well-fermented bread made of sound grain, the flesh and broth of young animals, with now and then a glass of generous wine, or good ale. The air ought to be open, dry, and not too cold, and the patient should take as much exercise as he can bear. This is of the utmost importance. Children who have sufficient exercise are seldom troubled with the scrophula.

MEDICINE.—The vulgar are remarkably credulous with regard to the cure of the scrophula; many of them believing in the virtue of the royal touch, that of the seventh son, &c. The truth is, we know but little either of the nature or cure of this disease, and where reason or medicine fail, superstition always comes in their place. Hence it is, that in diseases which are the most difficult to understand, we generally hear of the greatest number of miraculous cures being performed. Here, however, the deception, is easly accounted for. The scrophula, at a certain period of life, often cures of itself; and if the patient happens to be touched about this time, the cure is imputed to the touch, and not to Nature, who is really the physician. In the same way, the insignificant nostrums of quacks and old women often gain applause when they deserve none.

There is nothing more pernicious than the custom of plying children in the scrophula with strong purgative medicines. People imagine it proceeds from humours which must be purged off, without considering that these purgatives increase the debility, and aggravate the disease. It has indeed been found, that keeping the body gently open for some time, especially with sea-water, has a good effect; but this should only be given in gross habits, and in such quantity as to procure one, or at most two stools every day.

Bathing in the salt water has likewise a very good effect, especially in the warm season. I have often known a course of bathing in salt water, and drinking it in such quantities as to keep the body gently open, cure a scrophula, after many other medicines had been tried in vain. When salt water cannot be obtained, the patient may be bathed in fresh water, and his body kept open by small quantities of salt and water, or some other mild purgative.

Next to cold bathing, and drinking the salt water, we would recommend the Peruvian bark. The cold bath may

be used in Summer, and the bark in Winter. To an adult half a dram of the bark in powder may be given in a glass of red wine four or five times a-day. Children, and such as cannot take it in substance, may use the decoction made in the following manner :

Boil an ounce of Peruvian bark and a dram of Winter's bark, both grossly powdered, in an English quart of water to a pint : towards the end, half an ounce of sliced liquorice-root, and a handful of raisins, may be added, which will both render the decoction less disagreeable, and make it up more of the bark. The liquor must be strained, and two, three, or four table-spoonfuls, according to the age of the patient, given three times a-day ; but, in place of this, I now use the compound tincture of bark.

The Moffat and Harrowgate waters, especially the latter, are likewise very proper medicines in the scrophula. They ought not, however, to be drank in large quantities, but should be taken so as to keep the body gently open, and must be used for a considerable time.

The hemlock may sometimes be used with advantage in the scrophula. Some lay it down as a general rule, that the sea water is most proper before there are any suppuration or symptoms of *tabes ;* the Peruvian bark, when there are running sores, and a degree of hectic fever ; and the hemlock in old inveterate cases, approaching to the schirrous or cancerous state. Either the extract or the fresh juice of this plant may be used. The dose may be small at first, and increased gradually as far as the stomach is able to bear it.

External applications are of little use. Before the tumour breaks, nothing ought to be applied to it, unless a piece of flannel, or something to keep it warm. After it breaks, the sore may be dressed with some digestive ointment. What I have always found to answer best, was the yellow basilicon mixed with about a sixth or eighth part of its weight of red precipitate of mercury. The sore may be dressed with this twice a-day ; and if it be very fungous, and does not digest well, a larger proportion of the precipitate may be added.

Medicines which mitigate this disease, though they do not cure it, are not to be despised. If the patient can be kept alive by any means till he arrives at the age of puberty,

he has a great chance to get well; but if he does not recover at this time, in all probability he never will.

There is no malady which parents are so apt to communicate to their offspring as the scrophula, for which reason people ought to beware of marrying into families affected with this disease.

For the means of preventing the scrophula, we must refer the reader to the observations on nursing, at the beginning of the book.

OF THE ITCH.

Though this disease is commonly communicated by infection, yet it seldom prevails where due regard is paid to cleanliness, fresh air, and wholesome diet. It generally appears in form of small watery pustules, first about the wrists, or between the fingers; afterwards it affects the arms, legs, thighs, &c. These pustules are attended with an intolerable itching, especially when the patient is warm in bed, or sits by the fire. Sometimes, indeed, the skin is covered with large blotches or scabs, and at other times with a white scurf, or scaly eruption. This last is called the Dry Itch, and is the most difficult to cure.

The itch is seldom a dangerous disease, unless when it is rendered so by neglect or improper treatment. If it be suffered to continue too long, it may vitiate the whole mass of humours; and, if it be suddenly driven in, without proper evacuations, it may occasion fevers, inflammations of the viscera, or other internal disorders.

The best medicine yet known for the itch is sulphur, which ought to be used both externally and internally. The parts most affected may be rubbed with an ointment made of the flower of sulphur, two ounces; crude sal ammoniac finely powdered, two drams; hogslard or butter, four ounces. If a scruple or half a dram of the essence of lemon be added, it will entirely take away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities at bed-time twice or thrice a-week. It is seldom necessary to rub the whole body; but when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time.

Before the patient begins to use the ointment, he ought,

if he be of a full habit, to bleed or take a purge or two. It will likewise be proper, during the use of it, to take every night and morning as much of the flower of brimstone and cream of tartar, in a little treacle or new milk, as will keep the body gently open. He should beware of catching cold, should wear more clothes than usual, and take every thing warm. The same clothes, the linen excepted, ought to be worn all the time of using the ointment; and such clothes as have been worn while the patient was under the disease, are not to be used again, unless they have been fumigated with brimstone, and thoroughly cleansed, otherwise they will communicate the infection anew.*

I never knew brimstone, when used as directed above, fail to cure the itch; and I have reason to believe, that, if duly persisted in, it never will fail; but if it be only used once or twice, and cleanliness neglected, it is no wonder if the disorder returns. The quantity of ointment mentioned above will generally be sufficient for the cure of one person; but, if any symptoms of the disease should appear again, the medicine must be repeated. It is both more safe and efficacious when persisted in for a considerable time, than when a large quantity is applied at once. As most people dislike the smell of sulphur, they may use in its place the powder of white hellebore root made up into an ointment, in the same manner, which will seldom fail to cure the itch.

People ought to be extremely cautious lest they take other eruptions for the itch; as the stoppage of these may be attended with fatal consequences. Many of the eruptive disorders to which children are liable, have a near resemblance; and I have often known infants killed by being rubbed with greasy ointments that make these eruptions strike suddenly in, which nature had thrown out to preserve the patient's life, or prevent some other malady.

Much mischief is likewise done by the use of mercury in this disease. Some persons are so fool-hardy as to wash the parts affected with a strong solution of the corrosive sublimate. Others use the mercurial ointment, without

* Sir John Pringle observes, that though this disease may seem trifling, there is no one in the army that is more troublesome to cure, as the infection often lurks in clothes, &c. and breaks out a second, or even a third time. The same inconveniency occurs in private families, unless particular regard be paid to the changing or cleaning of their clothes, which last is by no means an easy operation.

taking the least care either to avoid cold, keep the body open, or observe a proper regimen. The consequences of such conduct may be easily guessed. I have known even the mercurial girdles produce bad effects, and would advise every person, as he values his health, to beware how he uses them. Mercury ought never to be used as a medicine without the greatest care. Ignorant people look upon these girdles as a kind of charm, without considering that the mercury enters the body.

It is not to be told what mischief is done by using mercurial ointment for curing the itch and killing vermin; yet it is unnecessary for either: the former may be always more certainly cured by sulphur, and the latter will never be found where due regard is paid to cleanliness.

Those who would avoid this detestable disease, ought to beware of infected persons, to use wholesome food, and to study universal cleanliness.*

CHAP. XL.

OF THE ASTHMA.

The asthma is a disease of the lungs, which seldom admits of a cure. Persons in the decline of life are most liable to it. It is distinguished into the moist and dry, or humoral and nervous. The former is attended with expectoration or spitting; but in the latter the patient seldom spits, unless sometimes a little tough phlegm by the mere force of coughing.

Causes.—The asthma is sometimes hereditary. It may likewise proceed from a bad formation of the breast; the fumes of metals or minerals taken into the lungs; violent exercise, especially running; the obstruction of customary evacuations, as the menses, hæmorrhoids, &c.; the sudden

* The itch is now by cleanliness banished from every genteel family in Britain. It still, however, prevails among the poorer sorts of peasants in Scotland, and among the manufacturers in England. These are not only sufficient to keep the seeds of the disease alive, but to spread the infection among others. It were to be wished that some effectual method could be devised for extirpating it altogether. Several country clergymen have told me, that by getting such as were infected cured, and strongly recommending an attention to cleanliness, they have banished the itch entirely out of their parishes. Why might not others do the same?

retrocession of the gout, or striking in of eruptions, as the small-pox, measles, &c.; violent passions of the mind, as sudden fear or surprise. In a word, the disease may proceed from any cause that either impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

Symptoms.—An asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great, that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of the asthma generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or has taken some food which the stomach could not digest, as pastries, toasted cheese, or the like.

The paroxysm is commonly ushered in with listlessness, want of sleep, hoarseness, a cough, belching of wind, a sense of heaviness about the breast, and difficulty of breathing. To these succeed heat, fever, pain of the head, sickness and nausea, great oppression of the breast, palpitation of the heart, a weak and sometimes intermitting pulse, an involuntary flow of tears, bilious vomitings, &c. All the symptoms grow worse towards night; the patient is easier when up than in bed, and is very desirous of cool air.

Regimen.—The food ought to be light, and of easy digestion. Boiled meats are to be preferred to roasted, and the flesh of young animals to that of old. All windy food, and whatever is apt to swell in the stomach, is to be avoided. Light puddings, white broths, and ripe fruits baked, boiled, or roasted, are proper. Strong liquors of all kinds, especially malt-liquor, are hurtful. The patient should eat a very light supper, or rather none at all, and should never suffer himself to be long costive. His clothing should be warm, especially in the winter season. As all disorders of the breast are much relieved by keeping the feet warm, and promoting the perspiration, a flannel shirt or waistcoat, and thick shoes, will be of singular service.

But nothing is of so great importance in the asthma as pure and moderately warm air. Asthmatic people can seldom bear either the close heavy air of a large town, or the

sharp keen atmosphere of a bleak hilly country; a medium, therefore, between these is to be chosen. The air near a large town is often better than at a distance, provided the patient be removed so far as not to be affected by the smoke. Some asthmatic patients indeed breathe easier in town than in the country; but this is seldom the case, especially in towns where much coal is burnt. Asthmatic persons, who are obliged to be in town all day, ought at least to sleep out of it. Even this will often prove of great service. Those who can afford it, ought to travel into a warmer climate. Many asthmatic persons who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy.

Exercise is likewise of very great importance in the asthma, as it promotes the digestion, and greatly assists in the preparation of the blood. The blood of asthmatic persons is seldom duly prepared, owing to the proper action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, horseback, or in a carriage, as they can bear.

Medicine.—Almost all that can be done by medicine in this disease, is to relieve the patient when seized with a violent fit. This indeed requires the greatest expedition, as the disease often proves suddenly fatal. In the paroxysm or fit the body is generally bound; a purging-clyster with a solution of asafœtida ought therefore to be administered; and if there be occasion, it may be repeated two or three times. The patient's feet and legs ought to be immersed in warm water, and afterwards rubbed with a warm hand, or dry cloth. Bleeding, unless extreme weakness or old age should forbid it, is highly proper. If there be a violent spasm about the breast or stomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected, and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of castor and saffron mixed together in a cup of valerian-tea, twice or thrice a-day. Sometimes a vomit has a very good effect, and snatches the patient, as it were, from the jaws of death. This, however, will be more safe after other evacuations have been premised. A very strong infusion of roasted coffee is said to give ease in an asthmatic paroxysm.

In the moist asthma, such things as promote expectoration or spitting, ought to be used; as the sqrup of squills, gum-ammoniac, and such like. A common spoonful of the syrup or oxymel of squills, mixed with an equal quantity of cinnamon-water, may be taken three or four times through the day, and four or five pills made of equal parts of asa-fœtida and gum-ammoniac at bed-time.*

For the convulsive or nervous asthma antispasmodics and bracers are the most proper medicines. The patient may take a tea-spoonful of the paregoric elixir twice a-day. The Peruvian bark is sometimes found to be of use in this case. It may be taken in substance, or infused in wine. In short, every thing that braces the nerves or takes off spasm, may be of use in a nervous asthma. It is often relieved by the use of asses' milk; I have likewise known cow's milk drank warm in the morning have a very good effect in this case.

In every species of asthma, setons and issues have a good effect; they may either be set in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and efficacious remedy; and though they do not always cure the disease, yet they will often prolong the patient's life.

This disease, common as it is in Great Britain, is almost unknown in milder climates; hence, a change of climate is always advisable, and though neither that nor medicine can ever eradicate the disease, yet the change to a warmer country, with proper attention to regimen, may enable an asthmatic person to live many years in tolerable health. In this, as in most other disorders, no general rules can be laid down for every situation, but the patient's ease and constitution must be particularly consulted.

* After copious evacuations, large doses of æther have been found very efficacious in removing a fit of the asthma. I have likewise known the following mixture produce very happy effects: To four or five ounces of the solution or milk of gum-ammoniac add two ounces of simple cinnamon-water, the same quantity of balsamic syrup, and half an ounce of paregoric elixir. Of this two table-spoonfuls may be taken every three hours.

CHAP. XLI.

OF THE APOPLEXY.

The apoplexy is a sudden loss of sense and motion, during which the patient is to all appearance dead; the heart and lungs, however, still continue to move. Though this disease proves often fatal, yet it may sometimes be removed by proper care. It chiefly attacks sedentary persons of a gross habit, who use a rich and plentiful diet, and indulge in strong liquors. People in the decline of life are most subject to the apoplexy. It prevails most in Winter, especially in rainy seasons, and very low states of the barometer.

Causes.—The immediate cause of an apoplexy is a compression of the brain, occasioned by an excess of blood, or a collection of watery humours. The former is called a *sanguine*, and the latter a *serous* apoplexy. It may be occasioned by any thing that increases the circulation towards the brain, or prevents the return of the blood from the head: as intense study; violent passions;* viewing objects for a long time obliquely; wearing any thing too tight about the neck; a rich and luxurious diet; suppression of urine; suffering the body to cool suddenly after having been greatly heated; continuing long in a warm or cold bath; the excessive use of spiceries, or high-seasoned food; excess of venery; the sudden striking in of any eruption; suffering issues, setons, &c. suddenly to dry up, or the stoppage of any customary evacuation; a mercurial salivation pushed too far, or suddenly checked by cold; wounds or bruises on the head; long exposure to excessive cold; poisonous exhalations, &c.

Symptoms, and method of cure.—The usual forerunners of an apoplexy are giddiness, pain and swimming of the head; loss of memory; drowsiness; noise in the ears; the night-mare; a spontaneous flux of tears, and laborious re-

* I knew a woman who in a violent fit of anger was seized with a sanguine apoplexy. She at first complained of extreme pain, *as if daggers had been thrust through her head*, as she expressed it. Afterwards she became comatose, her pulse sunk very low, and was exceeding slow. By bleeding, blistering, and other evacuations, she was kept alive for about a fortnight. When her head was opened, a large quantity of extravasated blood was found in the left ventricle of the brain.

spiration. When persons of an apoplectic make observe these symptoms, they have reason to fear the approach of a fit, and should endeavour to prevent it by bleeding, a slender diet, and opening medicines.

In the sanguine apoplexy, if the patient does not die suddenly, the countenance appears florid, the face is swelled or puffed up, and the blood-vessels, especially about the neck and temples, are turgid; the pulse beats strong; the eyes are prominent and fixed, and the breathing is difficult, and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with vomiting.

In this species of apoplexy every method must be taken to lessen the force of the circulation towards the head. The patient should be kept perfectly easy and cool. His head should be raised pretty high, and his feet suffered to hang down. His clothes ought to be loosened, especially about the neck, and fresh air admitted into his chamber. His garters should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. As soon as the patient is placed in a proper posture, he should be bled freely in the neck or arm, and, if there be occasion, the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil, or fresh butter, and a spoonful or two of common salt in it, may be administered every two hours, and blistering-plasters applied between the shoulders, and to the calves of the legs.

As soon as the symptoms are a little abated, and the patient is able to swallow, he ought to drink freely of some diluting opening liquor; as a decoction of tamarinds and liquorice, cream-tartar whey, or common whey with cream of tartar dissolved in it. Or he may take any cooling purge, as Glauber's salts, manna dissolved in an infusion of senna, or the like. All spirits, and other strong liquors, are to be avoided. Even volatile salts held to the nose do mischief. Vomits, for the same reason, ought not to be given, or any thing that may increase the motion of the blood towards the head.

In the serous apoplexy, the symptoms are nearly the same, only the pulse is not so strong, the countenance is less florid, and the breathing less difficult. Bleeding is not so necessary here as in the former case. It may, however, generally

be performed once with safety and advantage, but should not be repeated. The patient should be placed in the same posture as directed above, and should have blistering-plasters applied, and receive opening clysters in the same manner. Purges are here likewise necessary, and the patient may drink strong balm-tea. If he be inclined to sweat, it ought to be promoted by drinking small wine-whey, or an infusion of carduus benedictus. A plentiful sweat kept up for a considerable time has often carried off a serous apoplexy.

When apoplectic symptoms proceed from opium, or other narcotic substances taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way.

Persons of an apoplectic make, or those who have been attacked by it, ought to use a very spare and slender diet, avoiding all strong liquors, spiceries, and high-seasoned food. They ought likewise to guard against all violent passions, and to avoid the extremes of heat and cold. The head should be shaved, and daily washed with cold water. The feet ought to be kept warm, and never suffered to continue long wet. The body must be kept open either by food or medicine, and a little blood may be let every Spring and fall. Exercise should by no means be neglected; but it ought to be taken in moderation. Nothing has a more happy effect in preventing an apoplexy than perpetual issues or setons; great care, however, must be taken not to suffer them to dry up, without opening others in their stead. Apoplectic persons ought never to go to rest with a full stomach, or to lie with their heads low, or wear any thing too tight about their necks.

The above observations are of the greatest importance. A full stomach impedes the circulation, which is naturally slower during sleep than when awake. The head lying low seems to invite stagnation, and tight ligatures round the neck impede the return of the blood from the brain, and can hardly fail to produce an apoplexy

CHAP. XLII.

OF COSTIVENESS, AND OTHER AFFECTIONS OF THE STOMACH AND BOWELS.

We do not here mean to treat of those astrictions of the bowels which are the symptoms of diseases, as of the colic, the iliac passion, &c. but only to take notice of that infrequency of stools which sometimes happens, and which in some particular constitutions may occasion diseases.

Costiveness may proceed from drinking rough red wines, or other astringent liquors; too much exercise, especially on horseback. It may likewise proceed from a long use of cold insipid food, which does not sufficiently stimulate the intestines. Sometimes it is owing to the bile not descending to the intestines, as in the jaundice; and at other times it proceeds from diseases of the intestines themselves, as a palsy, spasms, torpor, tumours, a cold dry state of the intestines, &c.

Excessive costiveness is apt to occasion pains of the head, vomiting, colics, and other complaints of the bowels. It is peculiarly hurtful to hypochondriac and hysteric complaints, as it generates wind and other grievous symptoms. Some people, however, can bear costiveness to a great degree. I know persons who enjoy pretty good health, yet do not go to stool above once a-week, and others not above once a-fortnight. Indeed I have heard of some who do not go to stool above once a-month.

Persons who are generally costive should live upon a moistening and laxative diet; as roasted or boiled apples, pears, stewed prunes, raisins, gruels with currants, butter, honey, sugar, and such like. Broths with spinage, leeks, and other soft pot-herbs, are likewise proper. Rye-bread, or that which is made of a mixture of wheat and rye together, ought to be eaten. No person troubled with costiveness should eat white bread alone, especially that which is made of fine flour. The best bread for keeping the body soluble, is what in some parts of England they call *meslin*. It is made of a mixture of wheat and rye, and is very agreeable to those who are accustomed to it.

Costiveness is increased by keeping the body too warm,

and by every thing that promotes the perspiration; as wearing flannel, lying too long in bed, &c. Intense thought and a sedentary life are likewise hurtful. All the secretions and excretions are promoted by moderate exercise without doors, and by a gay, cheerful, sprightly temper of mind.

The drink should be of an opening quality. All ardent spirits, austere and astringent wines, as port, claret, &c. ought to be avoided. Malt liquor that is fine, and of a moderate strength, is very proper. Butter-milk, whey, and other watery liquors, are likewise proper, and may be drank in turns, as the patient's inclination directs.

Those who are troubled with costiveness, ought, if possible, to remedy it by diet, as the constant use of medicines for that purpose is attended with many inconveniences, and often with bad consequences.* I never knew any one get into a habit of taking medicine for keeping the body open, who could leave it off. In time the custom becomes necessary, and generally ends in a total relaxation of the bowels, indigestion, loss of appetite, wasting of the strength, and death.

When the body cannot be kept open without medicine, we would recommend gentle doses of rhubarb to be taken twice or thrice a-week. This is not near so injurious to the stomach as aloes, jalap, or the other drastic purgatives so much in use. Infusions of senna and manna may likewise be taken, or half an ounce of soluble tartar dissolved in water-gruel. About the size of a nutmeg of lenitive electuary taken twice or thrice a-day, generally answers the purpose very well.

* The learned Dr Arbuthnot advises those who are troubled with costiveness to use animal oils, as fresh butter, cream, marrow, fat broths, especially those made of the internal parts of animals, as the liver, heart, midriff, &c. He likewise recommends the expressed oils, of mild vegetables, as olives, almonds, pistachios, and the fruits themselves: all oily and mild fruits, as figs; decoctions of mealy vegetables; these lubricate the intestines; some saponaceous substances which stimulate gently, as honey, hydromel, or boiled honey and water, unrefined sugar, &c.

The Doctor observes, that such lenitive substances are proper for persons of dry atrabilarian constitutions, who are subject to astrictions of the belly, and the piles, and will operate when stronger medicinal substances are sometimes ineffectual; but that such lenitive diet hurts those whose bowels are weak and lax. He likewise observes, that all watery substances are lenitive, and that even common water, whey, sour milk, and butter-milk, have that effect:—That new milk, especially asses' milk, stimulates still more when it sours on the stomach; and that whey turned sour will purge strongly.

WANT OF APPETITE.

This may proceed from a foul stomach; indigestion; the want of free air and exercise; grief, fear, anxiety, or any of the depressing passions; excessive heat; the use of strong broths, fat meats, or any thing that palls the appetite, or is hard of digestion; the immoderate use of strong liquors, tea, tobacco, opium, &c.

The patient ought, if possible, to make choice of an open dry air; to take exercise daily on horseback or in a carriage; to rise betimes; and to avoid all intense thought. He should use a diet of easy digestion; and should avoid excessive heat and great fatigue.

If want of appetite proceed from errors in diet, or any other part of the patient's regimen, it ought to be changed. If nausea and retchings shew that the stomach is loaded with crudities, a vomit will be of service. After this a gentle purge or two of rhubarb, or any of the bitter purging salts, may be taken. The patient ought next to use some of the stomachic bitters infused in wine. Though gentle evacuations be necessary, yet strong purges and vomits are to be avoided, as they weaken the stomach, and hurt digestion. After proper evacuations, bitter elixirs and tinctures with aromatics may be used.

Elixir of vitriol is an excellent medicine in most cases of indigestion, weakness of the stomach, or want of appetite. From twenty to thirty drops of it may be taken twice or thrice a-day in a glass of wine or water. It may likewise be mixed with the tincture of the bark, one dram of the former to an ounce of the latter, and two tea-spoonfuls of it taken in wine and water, as above.

The chalybeate waters, if drank in moderation, are generally of considerable service in this case. The salt water has likewise good effects; but it must not be used too freely. The waters of Harrowgate, Scarborough, Moffat, and most other spas in Britain, may be used with advantage. We would advise all who are afflicted with indigestion and want of appetite, to repair to these places of public rendezvous. The very change of air, and the cheerful company, will be of service; not to mention the exercise, dissipation, amusements, &c.

OF THE HEART-BURN.

What is commonly called the *heart-burn*, is not a disease of that organ, but an uneasy sensation of heat or acrimony about the pit of the stomach, which is sometimes attended with anxiety, nausea, and vomiting.

It may proceed from a debility of the stomach, indigestion, bile, the abounding of an acid in the stomach, &c. Persons who are liable to this complaint ought to avoid stale liquors, acids, windy or greasy aliments, and should never use violent exercise soon after a plentiful meal. I know many persons who never fail to have the heart-burn if they ride soon after dinner, provided they have drank ale, wine, or any fermented liquor; but are never troubled with it when they have drank rum or brandy and water, without any sugar or acids.

When the heart-burn proceeds from debility of the stomach, or indigestion, the patient ought to take a dose or two of rhubarb; afterwards he may use infusions of the Peruvian bark, or any other of the stomachic bitters, in wine or brandy. Drinking a cup of camomile-tea, with fifteen or twenty drops of the elixir of vitriol in it, twice or thrice a-day, will strengthen the stomach and promote digestion. Exercise in the open air will likewise be of use.

When bilious humours occasion the heart-burn, a tea-spoonful of the sweet spirit of nitre in a glass of water, or a cup of tea, will generally give ease. If it proceeds from the use of greasy aliments, a dram of brandy or rum may be taken.

If acidity or sourness of the stomach occasions the heart-burn, absorbents are the proper medicines. In this case an ounce of powdered chalk, half an ounce of fine sugar, and a quarter of an ounce of gum-arabic, may be mixed in an English quart of water, and a tea-cupful of it taken as often as is necessary. Such as do not choose chalk, may take a tea-spoonful of prepared oyster-shells, or of the powder called crabs-eyes, and a glass of cinnamon or peppermint water. But the safest and best absorbent is *magnesia alba*. This not only acts as an absorbent, but likewise as a purgative; whereas chalk and other absorbents of that kind, are apt to lie in the intestines, and occasion obstruction. This

powder is not disagreeable, and may be taken in a cup of tea, or a glass of mint-water. A large tea-spoonful is the usual dose; but it may be taken in a much greater quantity when there is occasion. These things are now generally made up into lozenges, for the conveniency of being carried in the pocket, and taken at pleasure.

If wind be the cause of this complaint, the most proper medicines are those called carminatives; as aniseeds, juniper berries, ginger, canella alba, cardamom seeds, &c. These may either be chewed, or infused in wine, brandy, or other spirits; but these ought never to be used, unless they are absolutely necessary, as they are only drams in a dry form, and very pernicious to the stomach. One of the safest medicines of this kind is the tincture made by infusing an ounce of rhubarb, and a quarter of an ounce of the lesser cardamom seeds, in an English pint of brandy. After this has digested for two or three days, it ought to be strained, and four ounces of white sugar-candy added to it. It must stand to digest a second time till the sugar be dissolved. A table-spoonful of it may be taken occasionally for a dose.

I have frequently known the heart-burn cured, particulary in pregnant women, by chewing green tea. Two table spoonfuls of what is called the milk of gum-ammoniac, taken once or twice a-day, will sometimes cure the heart-burn.

CHAP. XLIII.

OF NERVOUS DISEASES.

Of all diseases incident to mankind, those of the nervous kind are the most complicated and difficult to cure. A volume would not be sufficient to point out their various appearances. They imitate almost every disease; and are seldom alike in two different persons, or even the same person at different times. Proteus-like, they are continually changing shape; and upon every fresh attack, the patient thinks he feels symptoms which he never experienced before. Nor do they only affect the body; the mind likewise suffers, and is often thereby rendered extremely weak and peevish. The low spirits, timorousness, melancholy, and fickleness of temper, which generally attend nervous dis-

orders, induce many to believe that they are entirely diseases of the mind; but this change of temper, is rather a consequence, than the cause of nervous diseases.

Causes.—Every thing that tends to relax or weaken the body, disposes it to nervous diseases, as indolence, excessive venery, drinking too much tea, or other weak watery liquors warm, frequent bleeding, purging, vomiting, &c. Whatever hurts the digestion, or prevents the proper assimilation of the food, has likewise this effect; as long fasting, excess in eating or drinking, the use of windy, crude, or unwholesome aliments, an unfavourable posture of the body, &c.

Nervous disorders often proceed from intense application to study. Indeed, few studious persons are entirely free from them. Nor is this at all to be wondered at; intense thinking not only preys upon the spirits, but prevents the person from taking proper exercise, by which means the digestion is impaired, the nourishment prevented, the solids relaxed, and the whole mass of humours vitiated. Grief and disappointment likewise produce the same effects. I have known more nervous patients who dated the commencement of their disorders from the loss of a husband, a favourite child, or from some disappointment in life, than from any other cause. In a word, whatever weakens the body, or depresses the spirits, may occasion nervous disorders; as unwholesome air, want of sleep, great fatigue, disagreeable apprehensions, anxiety, vexation, &c.

Symptoms.—We shall only mention some of the most general symptoms of these disorders, as it will be both an useless and impracticable task to enumerate the whole. They generally begin with windy inflations or distensions of the stomach and intestines; the appetite and digestion are usually bad; yet sometimes there is an uncommon craving for food, and a quick digestion. The food often turns sour on the stomach; and the patient is troubled with vomiting of clear water, tough phlegm, or a blackish-coloured liquor resembling the grounds of coffee. Excruciating pains are often felt about the navel, attended with rumbling or murmuring noise in the bowels; the body is sometimes loose, but more commonly bound, which occasions a retention of wind and great uneasiness.

The urine is sometimes in small quantity, at other times

very copious and quite clear. There is a great tightness of the breast, with difficulty of breathing; violent palpitations of the heart; sudden flushings of heat in various parts of the body; at other times a sense of cold, as if water were poured on them; flying pains in the arms and limbs, pains in the back and belly, resembling those occasioned by gravel; the pulse very variable, sometimes uncommonly slow, and at other times very quick; yawning, the hiccup, frequent sighing, and a sense of suffocation, as if from a ball or lump in the throat; alternate fits of crying and convulsive laughing; the sleep is unsound, and seldom refreshing; and the patient is often troubled with the night-mare.

As the disease increases, the patient is molested with head-aches, cramps, and fixed pains in various parts of the body; the eyes are clouded, and often affected with pain and dryness; there is a noise in the ears, and often a dulness of hearing; in short, the whole animal functions are impaired. The mind is disturbed on the most trivial occasions, and is hurried into the most perverse commotions, inquietudes, terror, sadness, anger, diffidence, &c. The patient is apt to entertain wild imaginations and extravagant fancies; the memory becomes weak, and the judgment fails.

Nothing is more characteristic of this disease than a constant dread of death. This renders those unhappy persons who labour under it peevish, fickle, impatient, and apt to run from one physician to another; which is one reason why they seldom reap any benefit from medicine, as they have not sufficient resolution to persist in any one course till it has time to produce its proper effects. They are likewise apt to imagine that they labour under diseases from which they are quite free; and are very angry if any one attempts to set them right, or laugh them out of their ridiculous notions.

Regimen.—Persons afflicted with nervous diseases ought never to fast long. Their food should be solid and nourishing, but of easy digestion. Fat meats and heavy sauces are hurtful. All excess should be carefully avoided. They ought never to eat more at a time than they can easily digest; and heavy suppers are to be avoided. If they feel themselves weak and faint between meals, they ought to eat a bit of bread, and drink a glass of wine. Though wine in excess enfeebles the body, and impairs the faculties of the

mind, yet taken in moderation, it strengthens the stomach, and promotes digestion. Wine and water is a very proper drink at meals; but if wine sours on the stomach, or the patient is much troubled with wind, brandy and water will answer better. Every thing that is windy or hard of digestion must be avoided. All weak and warm liquors are hurtful; as tea, coffee, punch, &c. People may find a temporary relief in the use of these, but they always increase the malady, as they weaken the stomach and hurt digestion. Above all things, drams are to be avoided. Whatever immediate ease the patient may feel from the use of ardent spirits, they are sure to aggravate the malady, and prove certain poisons at last. These cautions are the more necessary, as most nervous people are peculiarly fond of tea and ardent spirits; to the use of which many of them fall victims.

Exercise in nervous disorders is superior to all medicines. Riding on horseback is generally esteemed the best, as it gives motion to the whole body without fatiguing it. I have known some patients, however, with whom walking agreed better, and others who were most benefited by riding in a carriage. Every one ought to use that which he finds most beneficial. Long sea-voyages have an excellent effect; and to those who have sufficient resolution, we would by all means recommend this course. Even change of place, and the sight of new objects, by diverting the mind, have a great tendency to remove these complaints. For this reason a long journey, or a voyage, is of much more advantage than riding short journies near home.

A cool and dry air is proper, as it braces and invigorates the whole body. Few things tend more to relax and enervate than hot air, especially that which is rendered so by great fires, or stoves in small apartments. But when the stomach or bowels are weak, the body ought to be well guarded against cold, especially in Winter, by wearing a thin flannel waistcoat next the skin. This will keep up an equal perspiration, and defend the alimentary canal from many impressions to which it would otherwise be subject, upon every sudden change from warm to cold weather. Rubbing the body frequently with a flesh-brush, or a coarse linen cloth, is likewise beneficial; as it promotes the circulation, perspiration, &c. Persons who have weak nerves ought to rise early, and take exercise before breakfast, as

lying too long a-bed cannot fail to relax the solids. They ought likewise to be diverted, and to be kept as easy and cheerful as possible. There is not any thing which hurts the nervous system, or weakens the digestive powers, more than fear, grief, or anxiety.

MEDICINES.—Though nervous diseases are seldom radically cured, yet their symptoms may sometimes be alleviated, and the patient's life rendered at least more comfortable, by proper medicines.

When the patient is costive, he ought to take a little rhubarb, or some other mild purgative, and should never suffer his body to be long bound. All strong and violent purgatives are, however, to be avoided; as aloes, jalap, &c. I have generally seen an infusion of senna and rhubarb in brandy answer very well. This may be made of any strength, and taken in such quantity as the patient finds necessary. When the digestion is bad, or the stomach relaxed and weak, the following infusion of Peruvian bark and other bitters may be used with advantage:

Take of Peruvian bark an ounce, gentian-root, orange-peel, and coriander seed, of each half an ounce; let these ingredients be all bruised in a mortar, and infused in a bottle of brandy or rum, for the space of five or six days. A table-spoonful of the strained liquor may be taken in half a glass of water, an hour before breakfast, dinner, and supper.

Few things tend more to strengthen the nervous system than cold bathing. This practice, if duly persisted in, will produce very extraordinary effects; but when the liver or other *viscera* are obstructed, or otherwise unsound, the cold bath is improper. It is therefore to be used with very great caution. The most proper seasons for it are summer and autumn. It will be sufficient, especially for persons of a spare habit, to go into the cold bath three or four times a-week. If the patient be weakened by it, or feels chilly for a long time after coming out, it is improper.

In patients afflicted with wind, I have always observed the greatest benefit from the elixir of vitriol. It may be taken in the quantity of fifteen, twenty, or thirty drops, twice or thrice a-day, in a glass of water. This both expels wind, strengthens the stomach, and promotes digestion.

Opiates are generally extolled in these maladies; but as they only palliate the symptoms, and generally afterwards

increase the disease, we would advise people to be extremely sparing in the use of them, lest habit should render them at last absolutely necessary.*

It would be an easy matter to enumerate many medicines which have been extolled for relieving nervous disorders; but whoever wishes for a thorough cure, must expect it from regimen alone: we shall therefore omit mentioning more medicines, and again recommend the strictest attention to DIET, AIR, EXERCISE, and AMUSEMENTS.

OF MELANCHOLY.

Melancholy is that state of alienation or weakness of mind which renders people incapable of enjoying the pleasures, or performing the duties of life. It is a degree of insanity, and often terminates in absolute madness.

CAUSES.—It may proceed from an hereditary disposition; intense thinking, especially where the mind is long occupied about one object; violent passions or affections of the mind; as love, fear, joy, grief, pride, and such like. It may also be occasioned by excessive venery; narcotic or stupefactive poisons; a sedentary life; solitude; the suppression of customary evacuations; acute fevers; or other diseases. Violent anger will change melancholy into madness; and excessive cold, especially of the lower extremities, will force the blood into the brain, and produce all the symptoms of madness. It may likewise proceed from the use of aliment that is hard of digestion, or which cannot be easily assimilated; from a callous state of the integuments of the brain, or a dryness of the brain itself. To all which we may add gloomy and mistaken notions of religion.

SYMPTOMS.—When persons begin to be melancholly, they are dull; dejected; timorous; watchful; fond of solitude; fretful; fickle; captious and inquisitive; solicitous about trifles; sometimes niggardly, and other times prodigal. The body is generally bound; the urine thin, and in small quantity; the stomach and bowels inflated with wind; the

* Few days have passed for a considerable time, that I have not had occasion to recommend the following tincture to some of my nervous patients, and I have seldom been disappointed with regard to its effects: Take of compound tincture of the bark, and volatile tincture of valerian each an ounce; mix them; take a tea-spoonful in a glass of wine or water three or four times a-day.

complexion pale; the pulse slow and weak. The functions of the mind are also greatly perverted, insomuch that the patient often imagines himself dead, or changed into some other animal. Some have imagined their bodies were made of glass, or other brittle substances, and were afraid to move lest they should be broken to pieces. The unhappy patient, in this case, unless carefully watched, is apt to put an end to his own miserable life.

When the disease is owing to any obstruction of customary evacuations, or any bodily disorder, it is easier cured than when it proceeds from affections of the mind or an hereditary taint. A discharge of blood from the nose, looseness, scabby eruptions, the bleeding piles, or the *menses*, sometimes carry off this disease.

Regimen.—The diet should consist chiefly of vegetables of a cooling and opening quality. Animal food, especially salted or smoke-dried fish or flesh, ought to be avoided. All kinds of shell-fish are bad. Aliments prepared with onions, garlic, or any thing that generates thick blood, are likewise improper. All kinds of fruits that are wholesome may be eaten with advantage. Boerhaave gives an instance of a patient who, by a long use of whey, water, and garden-fruit, recovered, after having evacuated a great quantity of black-coloured matter.

Strong liquors of every kind ought to be avoided as poison. The most proper drink is water, whey, or very small beer. Tea and coffee are improper. If honey agrees with the patient, it may be eaten freely, or his drink may be sweetened with it. Infusions of balm-leaves, penny-royal, the roots of wild valerian, or the flowers of the lime-tree, may be drank freely, either by themselves, or sweetened with honey, as the patient shall choose.

The patient ought to take as much exercise in the open air as he can bear. This helps to dissolve the viscid humours, it removes obstructions, promotes the perspiration, and all the other secretions. Every kind of madness is attended with a diminished perspiration; all means ought therefore to be used to promote that necessary and salutary discharge. Nothing can have a more direct tendency to increase the disease, than confining the patient to a close apartment. Were he forced to ride or walk a certain number of miles every day, it would tend greatly to alleviate his

disorder; but it would have still a better effect, if he were obliged to labour a piece of ground. By digging, hoeing, planting, sowing, &c. both the body and mind would be exercised. A long journey, or a voyage, especially towards a warmer climate, with agreeable companions, has often very happy effects. A plan of this kind, with a strict attention to diet, is a much more rational method of cure, than confining the patient within doors, and plying him with medicines.

Medicine.—In the cure of this disease, particular attention must be paid to the mind. When the patient is in a low state, his mind ought to be soothed and diverted with variety of amusements, as entertaining stories, pastimes, music, &c. This seems to have been the method of curing melancholy among the Jews, as we learn from the story of King Saul; and indeed it is a very rational one. Nothing can remove diseases of the mind so effectually as applications to the mind itself, the most efficacious of which is music. The patient's company ought likewise to consist of such persons as are agreeable to him. People in this state are apt to conceive unaccountable aversions against particular persons; and the very sight of such persons is sufficient to distract their minds, and throw them into the utmost perturbation. In all kinds of madness, it is better to soothe and calm the mind, than to ruffle it by contradiction.

When the patient is high, evacuations are necessary. In this case he must be bled, and have his body kept open by purging medicines, as manna, rhubarb, cream of tartar, or the soluble tartar. I have seen the last have very happy effects. It may be taken in the dose of half an ounce, dissolved in water-gruel, every day, for several weeks, or even for months, if necessary. More or less may be given according as it operates. Vomits have likewise a good effect; but they must be pretty strong, otherwise they will not operate.

Whatever increases the evacuation of urine, or promotes perspiration, has a tendency to remove this disease. Both these secretions may be promoted by the use of nitre and vinegar. Half a dram of purified nitre may be given three or four times a-day, in any manner that is most agreeable to the patient; and an ounce and a half of distilled vinegar may be daily mixed with his drink. Dr Locker seems to

think vinegar the best medicine that can be given in this disease.

Camphire and musk have likewise been used in this case with advantage. Ten or twelve grains of camphire may be rubbed in a mortar with half a dram of nitre, and taken twice a-day, or oftener, if the stomach will bear it. If it will not sit upon the stomach in this form, it may be made into pills with gum asafœtida and Russian castor, and taken in the quantity above directed. If musk is to be administered, a scruple or twenty-five grains of it may be made into a bolus with a little honey or common syrup, and taken twice or thrice a-day. The antimonial wine is by some extolled for the cure of madness; it may be taken in a dose of forty or fifty drops twice or thrice a-day in a cup of tea. We do not mean that all these medicines should be administered at once; but whichever of them is given must be duly persisted in, and where one fails another may be tried.

As it is very difficult to induce patients in this disease to take medicines, we shall mention a few outward applications which sometimes do good; the principal of these are issues, setons, and warm bathing. Issues may be made in any part of the body, but they generally have the best effect near the spine. The discharge from these may be greatly promoted by dressing them with the mild blistering ointment, and keeping what are commonly called the orrice-peas in them. The most proper place for a seton is between the shoulder-blades; and it ought to be placed upwards and downwards, or in the direction of the spine.

OF THE PALSY.

The palsy is a loss or diminution of sense or motion, or of both, in one or more parts of the body. Of all the affections called nervous, this is the most suddenly fatal. It is more or less dangerous, according to the importance of the part affected. A palsy of the heart, lungs, or any part necessary to life, is mortal. When it affects the stomach, the intestines, or the bladder, it is highly dangerous. If the face be affected, the case is bad, as it shews that the disease proceeds from the brain. When the part affected feels cold, is insensible, or wastes away, or when the judgment and memory begin to fail, there is small hope of a cure.

Causes.—The immediate cause of palsy is any thing that prevents the regular exertion of the nervous power upon any particular muscle or part of the body. The occasional and predisposing causes are various, as drunkenness; wounds of the brain, or spinal marrow; pressure upon the brain, or nerves; very cold or damp air; the suppression of customary evacuations; sudden fear; want of exercise; or whatever greatly relaxes the system, as drinking much tea,* or coffee. The palsy may likewise proceed from wounds of the nerves themselves, from the poisonous fumes of metals or minerals, as mercury, lead, arsenic, &c.

In young persons of a full habit, the palsy must be treated in the same manner as the sanguine apoplexy. The patient must be bled, blistered, and have his body opened by sharp clysters or purgative medicines. But in old age, or when the disease proceeds from relaxation or debility, which is generally the case, a quite contrary course must be pursued. The diet must be warm and invigorating, seasoned with spicy and aromatic vegetables, as mustard, horse-radish, &c. The drink may be generous wine, mustard-whey, or brandy and water. Friction with the flesh-brush or a warm hand, is extremely proper, especially on the parts affected. Blistering plasters may likewise be applied to the affected parts with advantage. When this cannot be done, they may be rubbed with the volatile liniment, or the nerve ointment of the Edinburgh dispensatory. One of the best external applications is electricity. The shocks, or rather vibrations, should be received on the part affected; and they ought daily to be repeated for several weeks.

Vomits are very beneficial in this kind of palsy, and ought frequently to be administered. Cephalic snuff, or any thing that makes the patient sneeze, is likewise of use. Some pretend to have found great benefit from rubbing the parts affected with nettles; but this does not seem to be any way preferable to blistering. If the tongue be affected,

* Many people imagine, that tea has no tendency to hurt the nerves, and that drinking the same quantity of warm water would be equally pernicious. This, however, seems to be a mistake. Many persons drink three or four cups of warm milk and water daily, without feeling any bad consequences; yet the same quantity of tea would make their hands shake for twenty-four hours. That tea affects the nerves, is likewise evident from its preventing sleep, occasioning giddiness, dimness of the sight, sickness, &c.

the patient may gargle his mouth frequently with brandy and mustard; or he may hold a bit of sugar in his mouth, wet with the palsy drops, or compound spirit of lavender. The wild valerian-root is a very proper medicine in this case. It may either be taken in an infusion with sage-leaves, or half a dram of it in powder may be given in a glass of wine three or four times a-day. If the patient cannot use the valerian, he may take of *sal volatile oleosum*, compound spirits of lavender, and tincture of castor, each half an ounce; mix these together, and take forty or fifty drops in a glass of wine three or four times a-day. A table-spoonful of mustard-seed taken frequently is a very good medicine. The patient ought likewise to chew cinnamon bark, ginger, or other warm spiceries.

Exercise is of the utmost importance in the palsy; but the patient must beware of cold, damp, and moist air. He ought to wear flannel next his skin; and, if possible, should remove into a warmer climate.

OF THE EPILEPSY, OR FALLING SICKNESS.

The epilepsy is a sudden deprivation of all the senses, wherein the patient falls suddenly down, and is affected with violent convulsive motions. Children, especially those who are delicately brought up, are most subject to it. It more frequently attacks men than women, and is very difficult to cure. When the epilepsy attacks children, there is reason to hope it may go off about the time of puberty. When it attacks any person after twenty years of age, the cure is difficult; but when after forty, a cure is hardly to be expected. If the fit continues only for a short space, and returns seldom, there is reason to hope; but if it continues long, and returns frequently, the prospect is bad. It is a very unfavourable symptom when the patient is seized with the fits in his sleep.

Causes.—The epilepsy is sometimes hereditary. It may likewise proceed from blows, bruises, or wounds on the head; a collection of water, blood, or serous humours in the brain; a polypus, tumours or concretions within the skull; excessive drinking; intense study; excess of venery; worms; teething; suppression of customary evacuations; too great emptiness or repletion; violent passions or affec-

tions of the mind, as fear, joy, &c.; hysteric affections; contagion received into the body, as the infection of the small-pox, measles, &c.

Symptoms.—An epileptic fit is generally preceded by unusual weariness; pain of the head; dulness; giddiness; noise in the ears; dimness of the sight; palpitation of the heart; disturbed sleep; difficult breathing; the bowels are inflated with wind; the urine is in great quantity, but thin; the complexion is pale; the extremities are cold; and the patient often feels, as it were, a stream of cold air ascending towards his head.

In the fit, the patient generally makes an unusual noise; his thumbs are drawn in towards the palms of the hands; his eyes are distorted; he starts, and foams at the mouth; his extremities are bent or twisted various ways; he often discharges his seed, urine, and fæces involuntarily; and is quite destitute of all sense and reason. After the fit is over, his senses gradually return, and he complains of a kind of stupor, weariness, and pain of his head; but has no remembrance of what happened to him during the fit.

The fits are sometimes excited by violent affections of the mind, a debauch of liquor, excessive heat, cold, or the like.

This disease, from the difficulty of investigating the causes, and its strange symptoms, was formerly attributed to the wrath of the gods, or the agency of evil spirits. In modern times it has often, by the vulgar, been imputed to witchcraft or fascination. It depends, however, upon natural causes as much as any other malady; and its cure may often be effected by persisting in the use of proper means.

Regimen.—Epileptic patients ought, if possible, to breathe a pure and free air. Their diet should be light, but nourishing. They ought to drink nothing strong, to avoid swine's flesh, water-fowl, and likewise all windy and oily vegetables, as cabbage, nuts, &c. They ought to keep themselves cheerful, carefully guarding against all violent passions, as anger, fear, excessive joy, and the like.

Exercise is likewise of great use; but the patient must be careful to avoid all extremes either of heat or cold, all dangerous situations, as standing upon precipices, riding deep waters, and such like.

Medicine.—The intentions of cure must vary according

to the cause of the disease. If the patient be of a sanguine temperament, and there be reason to fear an obstruction in the brain, bleeding and other evacuations will be necessary. When the disease is occasioned by the stoppage of customary evacuations, these, if possible, must be restored; if this cannot be done, others may be substituted in their place. Issues or setons in this case have often a very good effect. When there is reason to believe that the disease proceeds from worms, proper medicines must be used to kill or carry off these vermin. When the disease proceeds from teething, the body should be kept open by emollient clysters, the feet frequently bathed in warm water, and, if the fits prove obstinate, a blistering-plaster may be put betwixt the shoulders. The same method is to be followed, when epileptic fits precede the eruption of the small-pox, or measles, &c.

When the disease is hereditary, or proceeds from a wrong formation of the brain, a cure is not to be expected. When it is owing to a debility, or too great an irritability of the nervous system, such medicines as tend to brace and strengthen the nerves may be used, as the Peruvian bark and steel; or the *anti-epileptic* electuaries recommended by Fuller and Mead.

The flowers of zinc have of late been highly extolled for the cure of the epilepsy. Though this medicine will not be found to answer the expectations which have been raised concerning it, yet in obstinate epileptic cases it deserves a trial. The dose is from one to three or four grains, which may be taken either in pills or a bolus, as the patient inclines. The best method is to begin with a single grain four or five times a-day, and gradually to increase the dose as far as the patient can bear it. I have known this medicine, when duly persisted in, prove beneficial.

Musk has sometimes been found to succeed in the epilepsy. Ten or twelve grains of it, with the same quantity of factitious cinnabar, may be made inlo a bolus, and taken every night and morning. Sometimes the epilepsy has been cured by electricity.

Convulsion-fits proceed from the same causes, and must be treated in the same manner as the epilepsy.

There is one particular kind of convulsion-fits which commonly goes by the name of St Vitus's dance, wherein the patient is agitated with strange motions and gesticula-

tions, which by the common people are generally believed to be the effects of witchcraft. This disease may be cured by repeated bleedings and purges; and afterwards using the medicines prescribed above for the epilepsy, viz. the Peruvian bark and snake-root, &c. Chalybeate waters are found to be beneficial in this case. The cold bath is likewise of singular service, and ought never to be neglected when the patient can bear it.

OF THE HICCUP.

The hiccup is a spasmodic or convulsive affection of the stomach and midriff, arising from any cause that irritates their nervous fibres.

It may proceed from excess in eating or drinking; from a hurt in the stomach; poisons; wind; inflammations or schirrous tumours of the stomach, intestines, bladder, midriff, or the rest of the *viscera*. In gangrenes, acute and malignant fevers, a hiccup is often the forerunner of death.

When the hiccup proceeds from the use of aliment that is flatulent, or hard of digestion, a draught of generous wine, or a dram of any spirituous liquor, will generally remove it. If poison be the cause, plenty of milk and oil must be drank, as has been formerly recommended. When it proceeds from an inflammation of the stomach, &c. it is very dangerous. In this case the cool regimen ought to be strictly observed. The patient must be bled, and take frequently a few drops of the sweet spirits of nitre in a cup of wine-whey. His stomach should likewise be fomented with cloths dipped in warm water, or have bladders filled with warm milk and water applied to it.

When the hiccup proceeds from a gangrene or mortification, the Peruvian bark, with other antiseptics, are the only medicines which have a chance to succeed. When it is a primary disease, and proceeds from a foul stomach, loaded either with a pituitous or a bilious humour, a gentle vomit and purge, if the patient be able to bear them, will be of service. If it arises from flatulencies, the carminative medicines directed for the heart-burn must be used.

When the hiccup proves very obstinate, recourse must be had to the most powerful aromatic and antispasmodic medicines; the principal of these is musk, fifteen or twenty

grains of which may be made into a bolus, and repeated occasionally. Opiates are likewise of service; but they must be used with caution. A bit of sugar dipped in compound spirits of lavender, or the volatile aromatic tincture, may be taken frequently. External applications are sometimes also beneficial; as the stomach plaster, or a cataplasm of the Venice treacle of the Edinburgh or London dispensatory, applied to the region of the stomach.

I lately attended a patient who had almost a constant hiccup for above nine weeks. It was frequently stopped by the use of musk, opium, wine, and other cordial and antispasmodic medicines, but always returned. Nothing, however, gave the patient so much ease as brisk small-beer. By drinking freely of this the hiccup was often kept off for several days, which was more than could be done by the most powerful medicines. The patient was at length seized with a vomiting of blood, which soon put an end to life. Upon opening the body, a large schirrous tumour was found near the pylorus, or right orifice of the stomach.

The hiccup may be removed by taking vinegar; or by a few drops of the oil of vitriol taken in water.

CRAMP OF THE STOMACH.

This disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the nervous, gouty, hysteric, and hypochondriac.

If the patient has an inclination to vomit, he ought to take some draughts of warm water, or weak camomile-tea, to cleanse the stomach. After this, if he has been costive, a laxative clyster may be given. He ought then to take laudanum. The best way of administering it is in a clyster. Sixty or seventy drops of liquid laudanum may be given in a clyster of warm water. This is much more certain than laudanum given by the mouth, which is often vomited, and in some cases increases the pain and spasms in the stomach.

If the pain and cramps return with great violence, after the effects of the anodyne clyster are over, another, with an equal or larger quantity of opium, may be given; and every four or five hours a bolus, with ten or twelve grains of musk,

and half a dram of the Venice treacle. In the mean time, the stomach ought to be fomented with cloths dipped in warm water, and bladders filled with warm milk and water should be constantly applied to it. I have often seen these produce the most happy effects. The anodyne balsam may also be rubbed on the part affected; and an anti-hysteric plaster worn upon it for some time after the cramps are removed, to prevent their return.

In very violent and lasting pains of the stomach, some blood ought to be let, unless the weakness of the patient forbids it. When the pains or cramps proceed from a suppression of the *menses*, bleeding is of use. If they be owing to the gout, recourse must be had to spirits, or some of the warm cordial waters. Blistering-plasters ought likewise in this case to be applied to the ancles. I have often seen violent cramps and pains of the stomach removed by covering it with a large plaster of treacle of the London Dispensatory.

OF THE NIGHT-MARE.

In this disease the patient, in time of sleep, imagines he feels an uncommon oppression or weight about his breast or stomach, which he can by no means shake off. He groans, and sometimes cries out, though oftener he attempts to speak in vain. Sometimes he imagines himself engaged with an enemy, and in danger of being killed, attempts to run away, but finds he cannot. Sometimes he fancies himself in a house that is on fire, or that he is in danger of being drowned in a river. He often thinks he is falling over a precipice, and the dread of being dashed to pieces suddenly awakes him.

This disorder has been supposed to proceed from too much blood; from a stagnation of blood in the brain, lungs, &c. But it is rather a nervous affection, and arises chiefly from indigestion. Hence we find that persons of weak nerves, who lead a sedentary life, and live full, are most commonly afflicted with the night-mare. Nothing tends more to produce it than heavy suppers, especially when eaten late, or the patient goes to bed soon after. Wind is likewise a very frequent cause of this disease; for which reason those who are afflicted with it ought to avoid all fla-

tulent food. Deep thought, anxiety, or any thing that oppresses the mind, ought also to be avoided.

As persons afflicted with the night-mare generally moan, or make some noise in the fit, they should be waked, or spoken to by such as hear them, as the uneasiness generally goes off as soon as the patient is awake. Dr Whyte says he generally found a dram of brandy, taken at bed-time, prevent this disease. That, however, is a bad custom, and in time loses its effect. We would rather have the patient depend upon the use of food of easy digestion, cheerfulness, exercise through the day, and a light supper taken early, than to accustom himself to drams. A glass of peppermint-water will often promote digestion as much as a glass of brandy, and is much safer. After a person of weak digestion, however, has eaten flatulent food, a dram may be necessary; in this case we would recommend it as the most proper medicine.

Persons who are young, and full of blood, if troubled with the night-mare, ought to take a purge frequently, and use a spare diet.

OF SWOONINGS.

People of weak nerves or delicate constitutions are liable to swoonings or fainting fits. These indeed are seldom dangerous when duly attended to; but when wholly neglected, or improperly treated, they often prove hurtful, and sometimes fatal.

The general causes of swoonings are sudden transitions from cold to heat; breathing air that is deprived of its proper spring or elasticity; great fatigue; excessive weakness; loss of blood; long fasting; fear, grief, and other violent passions or affections of the mind.

It is well known, that persons who have been long exposed to cold, often faint or fall into a swoon, upon coming into the house, especially if they drink hot liquor, or sit near a large fire. This might easily be prevented by people taking care not to go into a warm room immediately after they have been exposed to the cold air, to approach the fire gradually, and not to eat or drink any thing hot, till the body has been gradually brought into a warm temperature.

When any one, in consequence of neglecting these precautions, falls into a swoon, he ought immediately to be removed to a cooler apartment, to have ligatures applied above his knees and elbows, and to have his hands and face sprinkled with vinegar or cold water. He should likewise be made to smell to vinegar, and should have a spoonful or two of water, if he can swallow, with about a third part of vinegar mixed with it, poured into his mouth. If these should not remove the complaint, it may be necessary to bleed the patient, and afterwards to give him a clyster.

As air that is breathed frequently loses its elasticity or spring, it is no wonder if persons who respire in it often fall into a swoon or fainting fit. They are in this case deprived of the very principle of life. Hence it is that fainting fits are so frequent in all crowded assemblies, especially in hot seasons. Such fits, however, must be considered as a kind of temporary death; and, to the weak and delicate, they sometimes prove fatal. They ought therefore with the utmost care to be guarded against. The method of doing this is obvious. Let assembly-rooms, and all other places of public resort, be large and well ventilated; and let the weak and delicate avoid such places, particularly in warm seasons.

A person who faints in such a situation, ought immediately to be carried into the open air; his temples should be rubbed with strong vinegar or brandy, and volatile spirits or salts held to his nose. He should be laid upon his back with his head low, and have a little wine or some other cordial as soon as he is able to swallow it, poured into his mouth. If the person has been subject to hysteric fits, castor or asafœtida should be applied to the nose, or burnt feathers, horn, or leather, &c.

When fainting fits proceed from mere weakness or exhaustion, which is often the case after great fatigue, long fasting, loss of blood, or the like, the patient must be supported with generous cordials, as jellies, wines, spirituous liquors, and such like. These, however, must be given at first in very small quantities, and increased gradually as the patient is able to bear them. He ought to he allowed to lie quite still and easy, upon his back, with his head low, and should have fresh air admitted into his chamber. His food should consist of nourishing broths, sago-gruel with

wine, new milk, and other things of a light and cordial nature. These things are to be given out of the fit. All that can be done in the fit is, to let him smell to a bottle of Hungary-water, *eau de luce*, or spirits of hartshorn, and to rub his temples with warm brandy, or to lay a compress dipped in it to the pit of the stomach.

In fainting fits that proceed from fear, grief, or other violent passions or affections of the mind, the patient must be very cautiously managed. He should be suffered to remain at rest, and only made to smell to some vinegar. After he is come to himself, he may drink freely of warm lemonade, or balm-tea, with some orange or lemon-peel in it. It will likewise be proper, if the fainting fits have been long and severe, to cleanse the bowels by throwing in an emollient clyster.

It is common in fainting fits, from whatever cause they proceed, to bleed the patient. This practice may be very proper in strong persons of a full habit; but in those who are weak and delicate, or subject to nervous disorders, it is dangerous. The proper method with such people is, to expose them to the free air, and to use cordial and stimulating medicines, as volatile salts, Hungary-water, spirits of lavender, tincture of castor, and the like.

OF FLATULENCIES, OR WIND.

All nervous patients, without exception, are afflicted with wind or flatulencies in the stomach and bowels, which arise chiefly from the want of tone or vigour in these organs. Crude flatulent aliment, as green peas, beans, coleworts, cabbages, and such like, may increase this complaint; but strong and healthy people are seldom troubled with wind, unless they either overload their stomachs, or drink liquors that are in a fermented state, and consequently full of elastic air. While therefore the matter of flatulence proceeds from our aliments, the cause which makes air separate from them in such quantity as to occasion complaints, is almost always a fault of the bowels themselves, which are too weak either to prevent the production of elastic air, or to expel it after it is produced.

To relieve this complaint, such medicines ought to be

used as have a tendency to expel wind, and by strengthening the alimentary canal, to prevent its being produced there.*

The list of medicines for expelling wind is very numerous: they often however disappoint the expectation of both the physician and his patient. The most celebrated among the class of carminatives are juniper-berries; the roots of ginger and zedoary; the seeds of anise, caraway, and coriander; gum asafœtida and opium; the warm waters, tinctures, and spirits, as the aromatic water, the tincture of wood-foot, the volatile aromatic spirit, æther, &c.

Dr Whyte says, he found no medicine more efficacious in expelling wind than æther and laudanum. He generally gave the laudanum in a mixture with peppermint-water, and tincture of castor, or sweet spirits of nitre. Sometimes, in place of this, he gave opium in pills with asafœtida. He observes, that the good effects of opiates are equally conspicuous, whether the flatulence be contained in the stomach or intestines; whereas those warm medicines, commonly called *carminatives*, do not often give immediate relief, except when the wind is in the stomach.

With regard to æther, the Doctor says, he has often seen very good effects from it in flatulent complaints, where other medicines failed. The dose is a tea-spoonful mixed with two table-spoonfuls of water.† In gouty cases he observes, that æther, a glass of French brandy, or of the aromatic water, or ginger, either taken in substance, or infused in boiling water, are among the best medicines for expelling wind.

When the case of flatulent patients is such as makes it improper to give them warm medicines inwardly, the Doctor recommends external applications, which are sometimes of advantage. Equal parts of the anti-hysteric and stomach-plaster may be spread upon a piece of soft leather, of such size as to cover the greater part of the belly. This should be kept on for a considerable time, provided the patient be

* Many nervous people find great benefit from eating a dry biscuit, especially when the stomach is empty. I look upon this as one of the best carminative medicines; and would recommend it in all complaints of the stomach, arising from flatulence, indigestion, &c.

† Though the patient may begin with this quantity, it will be necessary to increase the dose gradually as the stomach can bear it. Æther is now given in considerably greater doses than it was in Dr Whyte's time.

able to bear it; if it should give great uneasiness, it may be taken off, and the following liniment used in its stead:

Take of Bate's anodyne balsam an ounce; of the expressed oil of mace half an ounce; oil of mint two drams. Let these ingredients be mixed together, and about a tablespoonful well rubbed on the parts at bed-time.

For strengthening the stomach and bowels, and consequently for lessening the production of flatulence, the Doctor recommends the Peruvian bark, bitters, chalybeates, and exercise. In flatulent cases, he thinks some nutmeg or ginger should be added to the tincture of the bark and bitters, and that the aromatic powder should be joined with the filings of iron.

When windy complaints are attended with costiveness, which is often the case, few things will be found to answer better than four or five of the following pills, taken every night at bed-time:

Take of asafœtida two drams; succotrine aloes, salt of iron, and powdered ginger, of each one dram; as much of the *elixir proprietatis* as will be sufficient to form them into pills.

On the other hand, when the body is too open, twelve or fifteen grains of rhubarb, with half a dram, or two scruples of the Japonic confection, given every other evening, will have very good effects.

In those flatulent complaints which come on about the time the *menses* cease, repeated small bleedings often give more relief than any other remedy.

With regard to diet, the Doctor observes, that tea, and likewise all flatulent aliments, are to be avoided; and that for drink, water with a little brandy or rum is not only preferable to malt liquor, but in most cases also to wine.

As Dr Whyte has paid great attention to this subject, and as his sentiments upon it in a great measure agree with mine, I have taken the liberty to adopt them; and shall only add to his observations, that exercise is in my opinion superior to all medicine, both for preventing the production, and likewise for expelling of flatulencies. These effects, however, are not to be expected from sauntering about or lolling in a carriage; but from labour, or such active amusements as give exercise to every part of the body.

OF LOW SPIRITS.

All who have weak nerves are subject to low spirits in a greater or less degree. Generous diet, the cold bath, exercise, and amusements, are the most likely means to remove this complaint. It is greatly increased by solitude, and indulging gloomy ideas, but may often be relieved by cheerful company, and sprightly amusements.

When low spirits are owing to a weak relaxed state of the stomach and bowels, an infusion of the Peruvian bark with cinnamon or nutmeg, will be proper. Steel joined with aromatics may likewise in this case be used with advantage; but riding, and a proper diet, are most to be depended on.

When they arise from a foulness of the stomach and intestines, or obstruction in the hypochondriac viscera, aloetic purges will be proper. I have sometimes known the Harrowgate or Tunbridge water of service in this case.

When low spirits proceed from a suppression of the menstrual or of the hæmorrhoidal flux, these evacuations may either be restored, or some others substituted in their place, as issues, setons, or the like. Dr Whyte observes, that nothing has such sudden good effects in this case as bleeding.

When low spirits have been brought on by long-continued grief, anxiety, or other distress of mind, agreeable company, variety of amusements, and change of place, especially travelling into foreign countries, will afford the most certain relief.

Persons afflicted with low spirits should avoid all kinds of excess, especially of venery and strong liquors. The moderate use of wine and other strong liquors is by no means hurtful; but when taken to excess they weaken the stomach, vitiate the humours, and depress the spirits. This caution is the more necessary, as the unfortunate and melancholy often fly to strong liquors for relief, by which means they never fail to precipitate their own destruction.

OF HYSTERIC AFFECTIONS.

These likewise belong to the numerous tribe of nervous diseases, which may be justly reckoned the reproach of me-

dicine. Women of a delicate habit, whose stomach and intestines are relaxed, and whose nervous system is extremely sensible, are most subject to hysteric complaints. In such persons an hysteric fit, as it is called, may be brought on by an irritation of the nerves of the stomach or intestines, by wind, acrid humour, or the like. A sudden suppression of the *menses* often gives rise to hysteric fits. They may likewise be excited by violent passions or affections of the mind, as fear, grief, anger, or great disappointments.

Sometimes the hysteric fit resembles a swoon or fainting fit, during which the patient lies as in a sleep, only the breathing is so low as scarcely to be perceived. At other times the patient is affected with catchings and strong convulsions. The symptoms which precede hysteric fits are likewise various in different persons. Sometimes the fits come on with coldness of the extremities, yawning and stretching, lowness of spirits, oppression and anxiety. At other times the approach of the fit is foretold by a feeling, as if there were a ball at the lower part of the belly, which gradually rises towards the stomach, where it occasions inflation, sickness, and sometimes vomiting; afterwards it rises into the throat, and occasions a degree of suffocation, to which quick breathing, palpitation of the heart, giddiness of the head, dimness of the sight, loss of hearing, with convulsive motions of the extremities and other parts of the body, succeed. The hysteric paroxysm is often introduced by an immoderate fit of laughter, and sometimes it goes off by crying. Indeed, there is not much difference between the laughing and crying of an hysteric lady.

Our aim in the treatment of this disease must be to shorten the fit or paroxysm when present, and to prevent its return. The longer the fits continue, and the more frequently they return, the disease becomes the more obstinate. Their strength is increased by habit, and they induce so great a relaxation of the system, that it is with difficulty removed.

It is customary, during the hysteric fit or paroxysm, to bleed the patient. In strong persons of a plethoric habit, and where the pulse is full, this may be proper; but in weak and delicate constitutions, or where the disease has been of long standing, or arises from inanition, it is not safe. The best course in such cases is to rouse the patient by strong

smells, as burnt feathers, asafœtida, or spirits of hartshorn, held to the nose. Hot bricks may also be applied to the soles of the feet, and the legs, arms, and belly may be strongly rubbed with a warm cloth. But the best application is, to put the feet and legs into warm water. This is peculiarly proper when the fits precede the flow of the menses. In case of costiveness, a laxative clyster with asafœtida will be proper; and as soon as the patient can swallow, two table-spoonfuls of a solution of asafœtida, or of some cordial julep, may be given frequently.*

The radical cure of this disorder will be best attempted at a time when the patient is most free from the fits. It will be greatly promoted by a proper attention to diet. A milk and vegetable diet, when duly persisted in, will often perform a cure. If, however, the patient has been accustomed to a more generous diet, it will not be safe to leave it off all at once, but by degrees. The most proper drink is water, with a small quantity of spirits. A cool dry air is the best. Cold bathing, and every thing that braces the nerves and invigorates the system, is beneficial; but lying too long in bed, or whatever relaxes the body, is hurtful. It is of the greatest importance to have the mind kept constantly easy and cheerful, and, if possible, to have it always engaged in some agreeable and interesting pursuit.

The proper medicines are those which strengthen the alimentary canal and the whole nervous system, as the preparations of iron, the Peruvian bark, and other bitters. Twenty drops of the elixir of vitriol, in a cup of the infusion of the bark, may be taken twice or thrice a-day. The bark and iron may likewise be taken in substance, provided the stomach can bear them; but they are generally given in too small doses to have any effect. The chalybeate waters generally prove beneficial in this disorder.

If the stomach is loaded with phlegm, vomits will be of use; but they should not be too strong, nor frequently repeated, as they tend to relax and weaken the stomach. If

* When hysteric fits are occasioned by sympathy, they may be cured by exciting an opposite passion. This is said to have been the case of a whole school of young ladies in Holland, who were all cured by being told, that the first who was seized should be burnt to death. But this method of cure, to my knowledge, will not always succeed. I would therefore advise, that young ladies who are subject to hysteric fits, should not be sent to boarding-schools, as the disease may be caught by imitation. I have known madness itself brought on by sympathy.

there is a tendency to costiveness, it must be removed either by diet, or by taking an opening pill as often as it shall be found necessary.

To lessen the irritability of the system, antispasmodic medicines will be of use. The best antispasmodic medicines are musk, opium, and castor. When opium disagrees with the stomach, it may either be applied externally, or given in clysters. It is often successful in removing those periodical head-aches to which hysteric and hypochondriac patients are subject. Castor has in some cases been found to procure sleep where opium failed; for which reason Dr Whyte advises that they should be joined together. He likewise recommends the anti-hysteric plaster to be applied to the *abdomen*.*

Hysteric women are often afflicted with cramps in various parts of the body, which are most apt to seize them in bed, or when asleep. The most efficacious medicines in this case are opium, blistering-plasters, and warm bathing or fomentations. When the cramp or spasm is very violent, opium is the remedy most to be depended on. In milder cases, immersing the feet and legs in warm water, or applying a blistering-plaster to the part affected, will often be sufficient to remove the complaint. In patients whose nerves are uncommonly delicate and sensible, it will be better to omit the blistering-plaster, and to attempt the cure by opiates, musk, camphire, and the warm bath.

Cramps are often prevented or cured by compression. Thus cramps in the legs are prevented, and sometimes removed, by tight bandages; and when convulsions arise from a flatulent distention of the intestines, or from spasms beginning in them, they may be often lessened or cured by making a pretty strong compression upon the *abdomen* by means of a broad belt. A roll of brimstone held in the hand is frequently used as a remedy for cramps. Though this seems to owe its effect chiefly to imagination, yet, as it sometimes succeeds, it merits a trial.† When spasms or convulsive motions arise from sharp humours in the stomach or intestines, no lasting relief can be procured till these are either

* Though antispasmodics and anodynes are universally recommended in this disease, yet all the extraordinary cures that ever I knew in hysteric cases, were performed by means of tonic and corroborating medicines.

† Some persons afflicted with cramps pretend to reap great benefit from small bundles of rosemary tied all night about their feet, ancles, and

corrected or expelled. The Peruvian bark has sometimes cured periodic convulsions after other medicines had failed.

OF HYPOCHONDRIAC AFFECTIONS.

This disease generally attacks the indolent, the luxurious, the unfortunate, and the studious. It becomes daily more common in this country, owing no doubt to the increase of luxury and sedentary employments. It has so near a resemblance to the immediately preceding, that many authors consider them as the same disease, and treat them accordingly. They require, however, a very different regimen; and the symptoms of the latter, though less violent, are more permanent than those of the former.

Men of a melancholy temperament, whose minds are capable of great attention, and whose passions are not easily moved, are, in the advanced periods of life, most liable to this disease. It is usually brought on by long and serious attention to abstruse subjects, grief, the suppression of customary evacuations, excess of venery, the repulsion of cutaneous eruptions, long-continued evacuations, obstructions in some of the viscera, as the liver, spleen, &c.

Hypochondriac persons ought never to fast long, and their food should be solid and nourishing. All acescent and windy vegetables are to be avoided. Flesh meats agree best with them, and their drink should be old claret or good Madeira. Should these disagree with the stomach, water with a little brandy or rum in it may be drank.

Cheerfulness and serenity of mind are by all means to be cultivated. Exercise of every kind is useful. The cold bath is likewise beneficial; and where it does not agree with the patient, friction with the flesh-brush or a coarse cloth may be tried. If the patient has it in his power, he ought to travel either by sea or land. A voyage or a long journey, especially towards a warmer climate, will be of more service than any medicine.

The general intentions of cure in this disease, are to strengthen the alimentary canal, and to promote the secretions. These intentions will be best answered by the different preparations of iron and the Peruvian bark, which, after proper evacuations, may be taken in the same manner as directed in the preceding disease.

If the patient be costive, it will be necessary to make use of some gentle opening medicine, as pills composed of equal parts of aloes, rhubarb, and asafœtida, with as much of the *elixir proprietatis* as is necessary to form the ingredients into pills. Two, three, or four of these may be taken as often as it shall be found needful to keep the body gently open. Such as cannot bear the asafœtida may substitute Spanish soap in its place.

Though a cheerful glass may have good effects in this disease, yet all manner of excess is hurtful. Intense study, and every thing that depresses the spirits, are likewise pernicious.

Though the general symptoms and treatment of nervous disorders were pointed out in the beginning of this chapter, yet, for the benefit of the unhappy persons afflicted with those obstinate and complicated maladies, I have treated several of their capital symptoms under distinct or separate heads. These, however, are not to be considered as different diseases, but as various modifications of the same disease. They all arise from the same general causes, and require nearly the same method of treatment. There are many other symptoms that merit particular attention, which the nature of my plan will not permit me to treat of at full length. I shall therefore omit them altogether, and conclude this chapter with a few general remarks on the most obvious means of preventing or avoiding nervous diseases.

In all persons afflicted with nervous disorders, there is a great delicacy and sensibility of the whole system, and an uncommon degree of weakness of the organs of digestion. These may be either natural or acquired. When owing to a defect in the constitution, they are hardly to be removed, but may be mitigated by proper care. When induced by diseases, as long or repeated fevers, profuse hæmorrhages, or the like, they prove also very obstinate, and will yield only to a course of regimen calculated to restore and invigorate the habit.

But nervous affections arise more frequently from causes, which it is in a great measure in our own power to avoid, than from diseases, or an original fault in the constitution, &c. Excessive grief, intense study, improper diet, and neglect of exercise, are the great sources of this extensive class of diseases.

It has been already observed, that grief indulged destroys

the appetite and digestion, depresses the spirits, and induces an universal relaxation and debility of the whole system. Instances of this are daily to be seen. The loss of a near relation, or any other misfortune in life, is often sufficient to occasion the most complicated series of nervous symptoms. Such misfortunes indeed are not to be avoided, but surely their effects, by a vigorous and proper exertion of the mind, might be rendered less hurtful. For directions in this matter we must refer the reader to the article GRIEF, in the chapter on the Passions.

The effects of intense study are pretty similar to those occasioned by grief. It preys upon the animal spirits, and destroys the appetite or digestion. To prevent these effects, studious persons ought, according to the poet, *to toy with their books.** They should never study too long at a time; nor attend long to one particular subject, especially if it be of a serious nature. They ought likewise to be attentive to their posture, and should take care frequently to unbend their minds by music, diversions, or going into agreeable company.

With regard to diet, I shall only observe, that nervous diseases may be induced either by excess or inanition. Both of these extremes hurt the digestion, and vitiate the humours. When nature is oppressed with fresh loads of food, before she has had time to digest and assimilate the former meal, her powers are weakened, and the vessels are filled with crude humours. On the other hand, when the food is not sufficiently nourishing, or is taken too seldom, the bowels are inflated with wind, and the humours, for want of regular fresh supplies of wholesome chyle, are vitiated. These extremes are therefore with equal care to be avoided. They both tend to induce a relaxation and debility of the nervous system, with all its dreadful train of consequences.

But the most general cause of nervous disorders is *indolence.* The active and laborious are seldom troubled with them. They are reserved for the children of ease and affluence, who generally feel their keenest force. All we shall say to such persons is, that the means of prevention and cure are both in their own power. If the constitution of human nature be such, that man must either labour or suffer diseases, surely no individual has any right to expect an exemption from the general rule.

* Armstrong on Health.

Those, however, who are willing to take exercise, but whose occupations confine them to the house, and perhaps to an unfavourable posture, really deserve our pity. We have in a former part of the book endeavoured to lay down rules for their conduct; and shall only add, that where these cannot be complied with, their place may, in some measure, be supplied by the use of bracing and strengthening medicines, as the Peruvian bark, with other bitters; the preparations of steel; the elixir of vitriol, and such like.

CHAP. XLIV.

DISORDERS OF THE SENSES.

We do not mean to treat of the nature of our sensations, or to give a minute description of the various organs by which they are performed; but to point out some of the diseases to which these organs are most liable, and to shew how they may be prevented or remedied.

OF THE EYE.

No organ of the body is subject to more diseases than the eye; nor is there any one of which the diseases are more difficult to cure. Though more ignorant persons pretend to cure these than any other class of diseases, yet a very superficial acquaintance with the structure of the eye, and the nature of vision, will be sufficient to convince any one of the danger of trusting to them. These diseases often exceed the skill of the most learned physician; hence we may easily infer the danger of trusting them to ignorant quacks, who, without all peradventure, put out more eyes than they cure. But, though the diseases of the eye can seldom be cured, they might often, by due care, be prevented; and, even where the sight is totally lost, many things might be done, which are generally neglected, to render the unhappy person both more useful to himself and to society.*

* It is a pity those who have the misfortune to be born blind, or who lose their sight when young, should be suffered to remain in ignorance or to beg. This is both cruelty and want of economy. There are many employments of which blind persons are very capable, as knitting, carding,

The eyes are hurt by viewing bright or luminous objects; keeping the head too long in a hanging posture; violent head-aches; excessive venery; the long use of bitters; the effluvia from acrid or volatile substances; various diseases; as the small-pox, measles, &c.; but above all, from night-watching, and candle-light studies. Long fasting is likewise hurtful to the eyes, and frequent heats and colds are no less pernicious. The eyes are often hurt by the stoppage of customary evacuations; as morning sweats; sweating of the feet; the menses in women; and the bleeding piles in men. All kinds of excess are likewise hurtful to the sight, particularly the immoderate use of ardent spirits, and other strong liquors.

In all diseases of the eyes, especially those attended with inflammation, the cold regimen ought to be observed. The patient must abstain from all spirituous liquors. The smoke of tobacco, smoky rooms, the vapours of onions and garlic, and all vivid lights and glaring colours, are carefully to be avoided. The drink may be water, whey, or small beer; and the aliment must be light, and of easy digestion.

For preventing disorders of the eyes, issues and setons are of prime use. Every person, whose eyes are tender, ought to have one or more of these in some part of the body. It will likewise be of use to keep the body gently open, and either to bleed or purge every spring and fall. All excess and night-studies are to be avoided. Such as do not choose a seton or an issue, will reap benefit from wearing a small Burgundy-pitch plaster between their shoulders.

A *gutta serena*, or *amaurosis*, is an abolition of the sight, without any apparent cause or fault in the eyes. When it is owing to a decay or wasting of the optic nerve, it does not admit of a cure; but when it proceeds from a compression of the nerves, by redundant humours, these may in some measure be drained off, and the patient relieved. For this purpose the body must be kept open with the laxative mercurial pills. If the patient be young and of a sanguine

turning a wheel, teaching languages, &c. Nor are instances wanting of persons who have arrived at the highest pitch of learning, without having the least idea of light. Witness the late famous Nicholas Sanderson of Cambridge, and my worthy friend Dr Thomas Blacklock of Edinburgh. The former was one of the first mathematicians of his age, and the latter, besides being a good poet and philosopher, was master of all the learned languages, and a very considerable adept in the liberal arts.

habit, he may be bled. Cupping with scarifications on the back part of the head, will likewise be of use. A running at the nose may be promoted by volatile salts, stimulating powders, &c. But the most likely means for relieving the patient are issues or blisters kept open for a long time on the back part of the head, behind the ears, or on the neck. I have known these restore sight, even after it had been for a considerable time lost.

Should these fail, recourse must be had to mercurial salivation; or, what will perhaps answer the purpose better, twelve grains of the corrosive sublimate of mercury may be dissolved in an English pint and a half of brandy, and a table-spoonful of it taken twice a-day, drinking half a pint of the decoction of sarsaparilla after it.

A *cataract* is an obstruction of the pupil, by the interposition of some opaque substance which either diminishes or totally extinguishes the sight. It is generally an opacity of the crystalline humour. In a recent or beginning cataract, the same medicines are to be used as in the gutta serena; and they will sometimes succeed. But when this does not happen, and the cataract becomes firm, it must be couched, or rather extracted. I have resolved a recent cataract by giving the patient frequent purges with calomel, keeping a poultice of fresh hemlock constantly upon the eye, and a perpetual blister on the neck.*

The *myopia*, or *short-sightedness*, and the *presbyopia*, or *seeing only at too great a distance*, are disorders which depend on the original structure or figure of the eye, and therefore admit of no cure. The inconveniences arising from them may, however, be in some measure remedied by the help of proper glasses. The former requires the aid of a concave, and the latter of a convex glass.

A *strabismus*, or *squinting*, depends upon an irregular contraction of the muscles of the eye from a spasm, palsy, epilepsy, or an ill habit. Children often contract this disorder by having their eyes unequally exposed to the light. They may likewise acquire it by imitation from a squinting nurse, or play-fellow, &c. As this disorder can hardly be cured, parents ought to be careful to prevent it. Almost the only thing which can be done for it, is to contrive a

* In both these cases electricity merits a trial.

mask for the child to wear, which will only permit him to see in a straight direction.

Spots or *specks* on the eyes are generally the effect of inflammation, and often appear after the small-pox, the measles, or violent ophthalmias. They are very difficult to cure, and often occasion total blindness. If the specks are soft and thin, they may sometimes be taken off by gentle caustics and discutients; as vitriol, the juice of celandine, &c. When these do not succeed, a surgical operation may be tried: the success of this, however, is always very doubtful.

The *bloodshot* eye may be occasioned by a stroke, a fall, retching, vomiting, violent coughing, &c. I have frequently known it happen to children in the hooping-cough. It appears at first like a bit of scarlet, and is afterwards of a livid or blackish colour. This disorder generally goes off without medicine. Should it prove obstinate, the patient may be bled, and have his eyes fomented with a decoction of comphry roots and elder-flowers. A soft poultice may be applied to the eyes; and the body should be kept open by gentle purgatives.

The *watery* or *weeping eye*, is generally occasioned by a relaxation or weakness of the glandular parts of that organ. These may be braced and strengthened by bathing the eye with brandy and water, Hungary-water, rose-water, with white vitriol dissolved in it, &c. Medicines which make a revulsion are likewise proper; as mild purgatives, perpetual blisters on the neck, bathing the feet frequently in lukewarm water, &c.

When this disease proceeds from an obstruction of the lachrymal duct, or natural passage of the tears, it is called a *fistula lachrymalis*, and can only be cured by a surgical operation.

OF THE EAR.

The functions of the ear may be injured by wounds, ulcers, or any thing that hurts its fabric. The hearing may likewise be hurt by excessive noise, violent colds in the head; fevers; hard wax, or other substances sticking in the cavity of the ear; too great a degree of moisture or dryness of the ear. Deafness is very often the effect of old age, and

is incident to most people in the decline of life. Sometimes it is owing to an original fault in the structure or formation of the ear itself. When this is the case, it admits of no cure; and the unhappy person not only continues deaf, but generally likewise dumb for life.*

When deafness is the effect of wounds or ulcers of the ear, or of old age, it is not easily removed. When it proceeds from cold of the head, the patient must be careful to keep his head warm, especially in the night; he should likewise take some gentle purges, and keep his feet warm, and bathe them frequently in lukewarm water at bed-time. When deafness is the effect of a fever, it generally goes off after the patient recovers. If it proceeds from dry wax sticking in the ears, it may be softened by dropping oil into them; afterwards they must be syringed with warm milk and water.

If deafness proceed from dryness of the ears, which may be known by looking into them, half an ounce of the oil of sweet almonds, and the same quantity of liquid opodeldock, or tincture of asafœtida, may be mixed together, and a few drops of it put into the ear every night at bed-time, stopping them afterwards with a little wool or cotton. Some, instead of oil, put a small slice of the fat of bacon into each ear, which is said to answer the purpose very well. When

* Though those who have the misfortune to be born deaf are generally suffered to continue dumb, and consequently are in a great measure lost to society; yet nothing is more certain than that such persons may be taught not only to read and write, but also to speak, and to understand what others say to them. Teaching the dumb to speak, will appear paradoxical to those who do not consider that the formation of sounds is merely mechanical, and may be taught without the assistance of the ear. This is not only capable of demonstration, but is actually reduced to practice by the ingenious Mr Thomas Braidwood of Edinburgh. This gentleman has, by the mere force of genius and application, brought the teaching of dumb persons to such a degree of perfection, that his scholars are generally more forward in their education than those of the same age who enjoy all their faculties. They not only read and write with the utmost readiness, but likewise *speak*, and are capable of holding conversation with any person in the light. What a pity any of the human species should remain in a state of idiotism, who are capable of being rendered as useful and intelligent as others! We mention this not only from humanity to those who have the misfortune to be born deaf, but also in justice to Mr Braidwood, whose success has far exceeded all former attempts this way; and indeed it exceeds imagination itself so far, that no person who has not seen and examined his pupils, can believe what they are capable of.—As this gentleman, however willing, is only able to teach a few, and as the far greater part of those who are born deaf cannot afford to attend him, it would be an act of great humanity, as well as public utility, to erect an academy for their benefit.

the ears abound with moisture, it may be drained off by an issue or seton, which should be made as near the affected parts as possible.

Some, for the cure of deafness, recommend the gall of an eel mixed with spirit of wine, to be dropped into the ear; others, equal parts of Hungary-water and spirit of lavender. Etmuller extols amber and musk; and Brookes says, he has often known hardness of hearing cured by putting a grain or two of musk into the ear with cotton wool. But these and other applications must be varied according to the cause of the disorder.*

Though such applications may sometimes be of service, yet they much oftener fail, and frequently they do hurt. Neither the eyes nor ears ought to be tampered with; they are tender organs, and require a very delicate touch. For this reason, what we would chiefly recommend in deafness is to keep the head warm. From whatever cause the disorder proceeds, this is always proper; and I have known more benefit from it alone, in the most obstinate cases of deafness, than from all the medicines I ever used.

OF THE TASTE AND SMELL.

Though these senses are not of so much importance to man in a state of society, as the sight and hearing, yet as the loss of them is attended with some inconveniency, they deserve our notice. They are seldom to be restored when lost; which ought to make us very attentive to their preservation, by carefully avoiding whatever may in the least prove injurious to them. As there is a very great affinity between the organs of tasting and smelling, whatever hurts the one generally affects the other.

Luxury is highly injurious to these organs. When the nose and palate are frequently stimulated by fragrant and poignant dishes, they soon lose the power of distinguishing taste and odours with any degree of nicety. Man in a state of nature, may perhaps have these faculties as acute as any other animal.

* A gentleman, on whose veracity I can depend, told me, that after using many things to no purpose for an obstinate deafness, he was at last advised to put a few drops of his own urine warm into his ears every night and morning, from which he received great benefit. It is probable that a solution of *sal ammoniac*, in water, would produce the same effect.

The sense of smelling may be diminished or destroyed by diseases; as the moisture, dryness, inflammation, or suppuration of that membrane which lines the inside of the nose, commonly called the olfactory membrane; the compression of the nerves which supply this membrane, or some fault in the brain itself at their origin. A defect, or too great a degree of solidity, of the small spongy bones of the upper jaw, the caverns of the forehead, &c. may likewise impair the sense of smelling. It may also be injured by a collection of fœtid matter in those caverns, which keeps constantly exhaling from them. Few things are more hurtful to the sense of smelling, than taking great quantities of snuff.

When the nose abounds with moisture, after gentle evacuations, such things as tend to take off irritation, and coagulate the thin sharp serum, may be applied; as the oil of aniseed mixed with fine flour; camphire dissolved in oil of almonds, &c. The vapours of amber, frankincense, gum-mastic, and benjamin, may likewise be received into the nose and mouth.

For moistening the mucus, when it is too dry, some recommend snuff made of the leaves of marjoram, mixed with the oil of amber, marjoram, and aniseed; or a sternutatory of calcined white vitriol; twelve grains of which may be mixed with two ounces of marjoram-water, and filtrated. The steam or vapour of vinegar upon hot iron received up the nostrils, is likewise of use for softening the mucus, opening obstructions, &c.

If there is an ulcer in the nose, it ought to be dressed with some emollient ointment, to which, if the pain be very great, a little laudanum may be added. If it be a venereal ulcer, it is not to be cured without mercury. In that case, the solution of the corrosive sublimate in brandy may be taken, as directed in the gutta serena. The ulcer ought likewise to be washed with it; and the fumes of cinnabar may be received up the nostrils.

If there be reason to suspect that the nerves which supply the organs of smelling are inert, or want stimulating, volatile salts, strong snuffs, and other things which occasion sneezing, may be applied to the nose. The forehead may likewise be anointed with balsam of Peru, to which may be added a little of the oil of amber.

The *taste* may be diminished by crusts, filth, mucus, aph-

thæ, pellicles, warts, &c. covering the tongue. It may be depraved by a fault of the saliva, which, being discharged into the mouth, gives the same sensations as if the food which the person takes had really a bad taste; or it may be entirely destroyed by injuries done to the nerves of the tongue and palate. Few things prove more hurtful either to the sense of tasting or smelling, than obstinate colds, especially those which affect the head.

When the taste is diminished by filth, mucus, &c. the tongue ought to be scraped, and frequently washed with a mixture of water, vinegar, and honey, or some other detergent. When the saliva is vitiated, which seldom happens, unless in fevers or other diseases, the curing of the disorder is the cure of this symptom. To relieve it, however, in the mean time, the following things may be of use: If there be a bitter taste, it may be taken away by vomits, purges, and other things which evacuate bile. What is called a nidorous taste, arising from putrid humours, is corrected by the juice of citrons, oranges, and other acids. A salt taste is cured by a plentiful dilution with watery liquors. An acid taste is destroyed by absorbents, and alkaline salts, as powder of oyster-shells, salt of wormwood, &c.

When the sensibility of the nerves, which supply the organs of taste, is diminished, the chewing of horse-radish, or other stimulating substances, will help to recover it.

OF THE TOUCH.

The sense of touching may be hurt by any thing that obstructs the nervous influence, or prevents its being regularly conveyed to the organs of touching; as pressure, extreme cold, &c. It may likewise be hurt by too great a degree of sensibility, when the nerve is not sufficiently covered by the cuticle or scarf-skin, or where there is too great a tension of it, or it is too delicate. Whatever disorders the functions of the brain and nerves, hurts the sense of touching. Hence it appears to proceed from the same general causes as palsy and apoplexy, and requires nearly the same mode of treatment.

In a *stupor*, or defect of touching, which arises from an obstruction of the cutaneous nerves, the patient must first be purged; afterwards such medicines as excite the action

of the nerves, or stimulate the system, may be used. For this purpose the spirit of hartshorn, *sal volatile oleosum*, horse-radish, &c. may be taken inwardly; the disordered parts, at the same time, may be frequently rubbed with fresh nettles, or spirit of *sal ammoniac*. Blistering-plasters and sinapisms applied to the parts will likewise be of use, as also warm bathing, especially in the natural hot baths.

There is nothing which tends more to relax the nervous system, and blunt the acuteness of every sense, than intemperance; a drunkard may be literally said to have lost his senses, and even when they return, every debauch increases the debility, till blindness, disease, and death ensue. Excess in eating is no less injurious; it destroys the taste and smell, and defeats the purposes of these senses.

Want of a due attention to cleanliness is likewise very injurious to the organs of sensation, and for this evil there is no excuse, as the remedy is in the power of every person. Nature has carefully guarded the extremities of the nerves, the interior parts of the nose, the ear, and the eye, against all external annoyance; and, independent of our will, strives to relieve those delicate organs from all impurities. Shall we then suffer dirt to gather upon the skin, to dull the sense of feeling, obstruct the pores, and drive back the noxious particles into the system which Nature endeavours to throw off, when soap and water, with a little manual labour, would prevent every inconvenience? Is it too much labour to dip the face with the eyes open, in a bason of clean water, four or five times every morning; to wash the ears, to rinse the nose and mouth, and by proper and temperate diet to keep the tongue clean?

CHAP. XLV.

OF A SCHIRRUS AND CANCER.

A SCHIRRUS is a hard indolent tumour usually seated in some of the glands; as the breasts, the arm-pits, &c. If the tumour becomes large, unequal, of a livid, blackish, or leaden colour, and is attended with violent pain, it gets the name of an *occult cancer*. When the skin is broken, and a *sanies* or ichorous matter of an abominable fœtid smell is discharged

from the sore, it is called an open or ulcerated cancer. Persons after the age of forty-five, particularly women, and those who lead an indolent sedentary life, are most subject to this disease.

Causes.—This disease is often owing to suppressed evacuations; hence it proves so frequently fatal to women of a gross habit, particularly old maids and widows, about the time when the menstrual flux ceases. It may likewise be occasioned by excessive fear, grief, anger, religious melancholy, or any of the depressing passions. Hence the unfortunate, the choleric, and those persons who devote themselves to a religious life in convents or monasteries, are often afflicted with it. It may also be occasioned by the long-continued use of food that is too hard of digestion, or of an acrid nature; by barrenness, celibacy, indolence, cold, blows, friction, pressure, or the like. Women often suffer from the last of these by means of their stays, which squeeze and compress their breasts so as to occasion great mischief. Sometimes the disease is owing to an hereditary disposition.

Symptoms.—This disorder seems often very trifling at the beginning. A hard tumour, about the size of a hazelnut, or perhaps smaller, is generally the first symptom. This will often continue for a long time without seeming to increase, or giving the patient great uneasiness; but if the constitution be hurt, or the tumour irritated by pressure or improper treatment of any kind, it begins to extend itself towards the neighbouring parts, by pushing out a kind of root or limbs. It then gets the name of *cancer*, from a fancied resemblance between these limbs and the claws of a crab. The colour of the skin begins to change, which is first red, afterwards purple, then bluish, livid, and at last black. The patient complains of heat, with a burning, gnawing, shooting pain. The tumour is very hard, rough, and unequal, with a protuberance, or rising, in the middle; its size increases daily, and the neighbouring veins become thick, knotty, and of a blackish colour.

The skin at length gives way, and a thin sharp ichor begins to flow, which corrodes the neighbouring parts till it forms a large unsightly ulcer. More occult cancers arise, and communicate with the neighbouring glands. The pain and stench become intolerable; the appetite fails; the strength is exhausted by a continual hectic fever; at last, a

violent hæmorrhage, or discharge of blood, from some part of the body, with faintings or convulsion fits, generally put an end to the miserable patient's life.

Regimen.—The diet ought to be light, but nourishing. All strong liquors, and high-seasoned or salted provisions, are to be avoided. The patient may take as much exercise as he can easily bear; and should use every method to divert thought, and amuse his fancy. All kinds of external injury are carefully to be guarded against, particularly of the affected part, which ought to be defended from all pressure, and even from the external air, by covering it with fur or soft flannel.

Medicine.—This is one of those diseases for which no certain remedy is yet known. Its progress, however, may sometimes be retarded, and some of its most disagreeable symptoms mitigated, by proper applications. One misfortune attending the disease is, that the unhappy patient often conceals it too long. Were proper means used in due time, a cancer might often be prevented; but after the disorder has arrived at a certain height, it generally sets all medicine at defiance.

When a schirrous tumour is first discovered, the patient ought to observe a proper regimen, and to take twice or thrice a-week a dose of the common purging mercurial pill. Some blood may also be let, and the part affected may be gently rubbed twice a-day, with a little of the mercurial ointment, and kept warm with fur or flannel. The food must be light, and an English pint of the decoction of woods or sarsaparilla may be drank daily. I have sometimes discussed hard tumours, which had the appearance of beginning cancers, by a course of this kind.

Should the tumour, however, not yield to this treatment, but, on the contrary, become larger and harder, it will be proper to extirpate it, either by the knife or caustic. Indeed, whenever this can be done with safety, the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole mass of humours corrupted by it. This, however, is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face; whereas, if it were done early, the patient's

life would not be endangered by the operation, and it would generally prove a radical cure.

When the cancer is so situated that it cannot be cut off, or if the patient will not submit to the operation, such medicines as will mitigate or relieve the most urgent symptoms may be used. Dr Home says, that half a grain of the corrosive sublimate of mercury, dissolved in a proper quantity of brandy, and taken night and morning, will often be of service in cancers of the face and nose. He likewise recommends an infusion of the *solanum*, or night-shade, in cancers of the breasts.

But the medicine most in repute at present for this disease is hemlock. Dr Storck, physician at Vienna, has of late recommended the extract of this plant as very efficacious in cancers of every kind. The Doctor says, he has given some hundred-weights of it without ever hurting any body, and often with manifest advantage. He advises the patient, however, to begin with very small doses, as two or three grains, and to increase the dose gradually till some good effect be perceived, and there to rest without further increase. From two or three grains at first, the Doctor says he has increased the dose to two, three, or four drams a-day, and finds that such doses may be continued for several weeks without any bad consequences.

The regimen which the Doctor recommends during the use of the medicine, is to avoid farinaceous substances not fermented, and too acrid aromatics. He says, good wine will not be hurtful to those who are accustomed to it, nor a moderate use of acids; and adds, that the patient should live in a pure free air, and keep his mind as quiet and cheerful as possible.

The Doctor does not pretend to fix the time in which a cancer may be resolved by the use of hemlock, but says he has given it for above two years in large doses without any apparent benefit: nevertheless, the patient has been cured by persisting in the use of it for half a year longer. This is at least encouragement to give it a fair trial. Though we are far from thinking the hemlock merits those extravagant encomiums which the Doctor has bestowed upon it, yet, in a disease which has so long baffled the boasted powers of medicine, we think it ought always to be tried.

The powder of hemlock is by some preferred to the ex-

tract. They are both made of the fresh leaves, and may be used nearly in the same manner. Dr Nicholson of Berwick says, he gradually increased the dose of the powder from a few grains to half a dram, and gave near four drams of it in a day with remarkably good effects. The hemlock may also be used externally either as a poultice or fomentation. The sore may likewise be kept clean by injecting daily a strong decoction of the tops of leaves into it.

Few things contribute more to the healing of foul sordid ulcers of any kind than keeping them thoroughly clean. This ought never to be neglected. The best application for this purpose seems to be the carrot poultice. The root of the common carrot may be grated, and moistened with as much water as will bring it to the consistence of a poultice or cataplasm. This must be applied to the sore, and renewed twice a-day. It generally cleans the sore, eases the pain, and takes away the disagreeable smell, which are objects of no small importance in such a dreadful disorder.

Wort, or an infusion of malt, has been recommended not only as a proper drink, but as a powerful medicine in this disease. It must be frequently made fresh, and the patient may take it at pleasure. Two, three, or even four English pints of it may be drank every day for a considerable time. No benefit can be expected from any medicine in this disease, unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed; and, when it admits of a cure at all, it must be brought about by inducing an almost total change of the habit, which must always be a work of time. Setons or issues in the neighbourhood of the cancer have sometimes good effects.*

When all other medicines fail, recourse must be had to

* In a cancer which had set all medicines, and even surgery, at defiance, I lately saw remarkable effects from an obstinate perseverance in a course of antiseptics. I ordered the deep ulcers to be washed to the bottom by means of a syringe, twice or thrice a-day, either with an infusion of the bark, or a decoction of carrot, and that the patient should take four or five times a-day, a glass of good wine, with half a dram of the best powdered bark in it. The sores, after being washed, were likewise sprinkled with the same powder. When the patient began this course, her death was daily expected. She continued it for above two years, with manifest advantage; but being told by an eminent surgeon, that the bark would not cure a cancer, and that the sores ought not to be washed, she discontinued the practice, and died in a few weeks. This course was not expected to cure the cancer, but to prolong the patient's life, which it evidently did almost to a miracle.

opium, as a kind of solace. This will not indeed cure the disease, but it will ease the patient's agony, and render life more tolerable while it continues.

To avoid this dreadful disorder, people ought to use wholesome food; to take sufficient exercise in the open air; to be as easy and cheerful as possible; and carefully to guard against all blows, bruises, and every kind of pressure upon the breast, or other glandular parts.*

The cancer is a most painful and loathsome disease; it kills by inches, and seldom admits of any cure except by the knife, and even that remedy does not always succeed. Tumours in the breast, which might have turned to cancers, have been cured by the camphorated mercurial ointment, applied twice a-day; but after the schirrus has broke and become a cancer, it will yield to no remedy. Quacks, these never-failing curers of disorders, confidently pretend to cure this disease; but these impostors generally send their patients to the grave, as a complete and final remedy for every disease.

CHAP. XLVI.

OF POISONS.

Every person ought, in some measure, to be acquainted with the nature and cure of poisons. They are generally taken unawares, and their effects are often so sudden and violent, as not to admit of delay, or allow time to procure the assistance of physicians. Happily indeed, no great degree of medical knowledge is here necessary; the remedies for most poisons being generally at hand, are easily obtained, and nothing but common prudence needful in the application of them.

The vulgar notion that every poison is cured by some counter-poison, as a specific, has done much hurt. People believe they can do nothing for the patient, unless they know the particular antidote to that kind of poison which

* As hemlock is the principal medicine recommended in this disease, we would have given some directions for the gathering and preparing of that plant; but as its different preparations are now kept in the shops, we think it much safer for people to get them there, with proper directions for using them.

he has taken: Whereas the cure of all poisons taken into the stomach, without exception, depends chiefly on discharging them as soon as possible.

There is no case wherein the indications of cure are more obvious. Poison is seldom long in the stomach before it occasions sickness, with an inclination to vomit. This shews plainly what ought to be done. Indeed, common sense dictates to every one, that, if any thing has been taken into the stomach which endangers life, it ought immediately to be discharged. Were this duly regarded, the danger arising from poisons might generally be avoided. The method of prevention is obvious, and the means is in the hands of every one.

We shall not take up the reader's time with a detail of the ridiculous notions which have prevailed among ignorant people in different ages with regard to poisons; neither shall we mention the boasted antidotes which have been recommended, either for preventing or obviating their effects; but shall content ourselves with pointing out the poisons most common in this country, and the means of avoiding their dangerous consequences.

Poisons either belong to the mineral, the vegetable, or the animal kingdom.

Mineral poisons are commonly of an acrid or corrosive quality; as arsenic, cobalt, the corrosive sublimate of mercury, &c.

Those of the vegetable kind are generally of a narcotic or stupefactive quality; as poppy, hemlock, henbane, berries of the deadly night-shade, &c.

Poisonous animals communicate their infection either by the bite or sting. This poison is very different from the former, and only produces its effects when received into the body by a wound.

Mineral Poisons.—Arsenic is the most common of this class; and, as the whole of them are pretty similar both in their effects and method of cure, what is said with respect to it will be applicable to every other species of corrosive poison.

When a person has taken arsenic, he soon perceives a burning heat, and a violent pricking pain in his stomach and bowels, with an intolerable thirst, and an inclination to vomit. The tongue and throat feel rough and dry; and,

if proper means be not soon administered, the patient is seized with great anxiety, hiccuping, faintings, and coldness of the extremities. To these succeed black vomits, fœtid stools, with a mortification of the stomach and intestines, which are the immediate forerunners of death.

On the first appearance of these symptoms the patient should drink large quantities of new milk and salad-oil till he vomits; or he may drink warm water mixed with oil. Fat broths are likewise proper, provided they can be got ready in time. Where no oil is to be had, fresh butter may be melted and mixed with the milk or water. These things are to be drank as long as the inclination to vomit continues. Some have drank eight or ten English quarts before the vomiting ceased; and it is never safe to leave off drinking while one particle of the poison remains in the stomach.

These oily or fat substances not only provoke vomiting, but likewise blunt the acrimony of the poison, and prevent its wounding the bowels; but if they should not make the person vomit, half a dram or two scruples of the powder of ipecacuanha must be given, or a few spoonfuls of the oxymel or vinegar of squills may be mixed with the water which he drinks. Vomiting may likewise be excited by tickling the inside of the throat with a feather. Should these methods however fail, half a dram of white vitriol, or five or six grains of emetic tartar, must be administered.

If tormenting pains are felt in the lower belly, and there is reason to fear that the poison has got down to the intestines, clysters of milk and oil must be very frequently thrown up; and the patient must drink emollient decoctions of barley, oatmeal, marsh-mallows, and such like. He must likewise take an infusion of senna and manna, a solution of Glauber's salts, or some other purgatives.

After the poison has been evacuated, the patient ought for some time to live upon such things as are of a healing and cooling quality; to abstain from flesh and all strong liquors, and to live upon milk, broth, gruel, light puddings, and other spoon meats of easy digestion. His drink should be barley-water, linseed-tea, or infusions of any of the mild mucilaginous vegetables.

Vegetable Poisons, besides heat and pain of the stomach, commonly occasion some degree of giddiness, and often a kind of stupidity or folly. Persons who have taken

these poisons must be treated in the same manner as for the mineral corrosive.

Though the vegetable poisons, when allowed to remain in the stomach, often prove fatal; yet the danger is generally over as soon as they are discharged. Not being of such a caustic or corrosive nature, they are less apt to wound or inflame the bowels, than mineral substances; no time, however, ought to be lost in having them discharged.

Opium, being frequently taken by mistake, merits particular attention. It is used as a medicine both in a solid and liquid form, which latter commonly goes by the name of laudanum. It is, indeed, a valuable medicine when taken in proper quantity; but, as an over-dose proves a strong poison, we shall point out its common effects, together with the method of cure.

An over-dose of opium generally occasions great drowsiness, with stupor and other apoplectic symptoms. Sometimes the person has so great an inclination to sleep, that it is almost impossible to keep him awake. Every method must, however, be tried for this purpose. He should be tossed, shaken, and moved about. Sharp blistering-plasters should be applied to his legs or arms, and stimulating medicines, as salts of hartshorn, &c. held under his nose. It will also be proper to let blood. At the same time every method must be taken to make him discharge the poison. This may be done in the manner directed above, viz. by the use of strong vomits, drinking plenty of warm water, with oil, &c.

Mead, besides vomits, in this case recommends acid medicines with lixivial salts. He says, that he has often given salt of wormwood mixed with juice of lemon in repeated doses with great success.

If the body should remain weak and languid after the poison has been discharged, nourishing diet and cordials will be proper; but when there is reason to fear that the stomach and bowels are inflamed, the greatest circumspection is necessary both with regard to food and medicine.

OF THE BITES OF POISONOUS ANIMALS.

We shall begin with the bite of a mad dog, as it is both the most common and dangerous animal poison in this country.

The creatures naturally liable to contract this disease, are, as far as we yet know, all of the dog kind, viz. foxes, dogs, and wolves. Hence it is called the *rabies canina*, or dog-madness. Of the last we have none in this island; and it so seldom happens that any person is bit by the first, that they scarcely deserve to be taken notice of. If such a thing should happen, the method of treatment is precisely the same as for the bite of a mad dog.

The symptoms of madness in a dog are as follow: At first he looks dull, shews an aversion to food and company: he does not bark as usual, but seems to murmur, is peevish, and apt to bite strangers; his ears and tail droop more than usual, and he appears drowsy; afterwards he begins to loll out his tongue, and froth at the mouth, his eye seeming heavy and watery: he now, if not confined, takes off, runs panting along with a kind of dejected air, and endeavours to bite every one he meets. Other dogs are said to fly from him. Some think this is a certain sign of madness, supposing that they know him by the smell; but it is not to be depended on. If he escapes being killed, he seldom runs above two or three days, till he dies exhausted with heat, hunger, and fatigue.

The disease is most frequent after long, dry, hot seasons; and such dogs as live upon putrid stinking carrion, without having enough of fresh water, are most liable to it.

When any person has been bit by a dog, the strictest inquiry ought to be made whether the animal was really mad. Many disagreeable consequences arise from neglecting to ascertain this point. Some people have lived in continual anxiety for many years, because they had been bit by a dog which they believed to be mad; but, as he had been killed on the spot, it was impossible to ascertain the fact. This should induce us, instead of killing a dog the moment he has bit any person, to do all in our power to keep him alive, at least till we can be certain whether he be mad or not.

Many circumstances may contribute to make people imagine a dog mad. He loses his master, runs about in quest of him, is set upon by other dogs, and perhaps by men. The creature, thus frightened, beat, and abused, looks wild, and lolls out his tongue as he runs along. Immediately a crowd is after him; while he, finding himself closely pursued, and taking every one he meets for an enemy, naturally at-

tempts to bite him in self-defence. He soon gets knocked on the head, and it passes currently that he was mad, as it is then impossible to prove the contrary.

This being the true history of by far the greater part of those dogs which pass for mad, is it any wonder that numberless whimsical medicines have been extolled for preventing the effects of their bite? This readily accounts for the great variety of infallible remedies for the bite of a mad dog, which are to be met with in almost every family. Though not one in a thousand has any claim to merit, yet they are all supported by numberless vouchers. No wonder that imaginary diseases should be cured by imaginary remedies. In this way, credulous people first impose upon themselves, and then deceive others. The same medicine which was supposed to prevent the effects of the bite, when the dog was not mad, is recommended to a person who has had the misfortune to be bit by a dog that was really mad. He takes it, trusts to it, and is undone.

To these mistakes we must impute the frequent ill success of the medicines used for preventing the effects of the bite of a mad dog. It is not owing so much to a defect in medicine, as to wrong applications. I am persuaded, if proper medicines were administered immediately after the bite is received, and continued for a sufficient length of time, we would not lose one in a thousand of those who have the misfortune to be bit by a mad dog.

This poison is generally communicated by a wound, which nevertheless heals as soon as a common wound: but afterwards it begins to feel painful, and as the pain spreads towards the neighbouring parts, the person becomes heavy and listless. His sleep is unquiet, with frightful dreams; he sighs, looks dull, and loves solitude. These are the forerunners, or rather the first symptoms, of that dreadful disease occasioned by the bite of a mad dog. But as we do not propose to treat fully on the disease itself, but to point out the method of preventing it, we shall not take up time in shewing its progress from the first invasion to its commonly fatal end.

The common notion, that this poison may lie in the body for many years, and afterwards prove fatal, is both hurtful and ridiculous. It must render such persons as have had the misfortune to be bit very unhappy, and can have no

good effects. If the person takes proper medicines for forty days after the time of his being bit, and feels no symptoms of the disease, there is reason to believe him out of danger. Some have indeed gone mad twelve months after being bit, but seldom later.

The medicines recommended for preventing the effects of the bite of a mad dog, are chiefly such as promote the different secretions, and antispasmodics.

Dr Mead recommends a preventive medicine, which he says he never knew fail, though in the space of thirty years he had used it a thousand times.

The Doctor's prescription is as follows:

'Take ash coloured ground liver-wort, cleaned, dried, and powdered, half an ounce; of black pepper powdered, a quarter of an ounce. Mix these well together, and divide the powder into four doses; one of which must be taken every morning fasting, for four mornings successively, in half an English pint of cow's milk warm.

'After these four doses are taken, the patient must go into the cold bath, or a cold spring or river, every morning fasting, for a month; he must be dipped all over, but not stay in (with his head above water) longer than half a minute, if the water be very cold. After this he must go in three times a week for a fortnight longer.

'The person must be bled before he begins to use the medicine.'*

We shall next mention the famous East-India specific, as it is called. This medicine is composed of cinnabar and musk. It is esteemed a great antispasmodic; and by many extolled as an infallible remedy for preventing the effects of the bite of a mad dog.

'Take native and factitious cinnabar, of each twenty-four grains, musk sixteen grains. Let these be made into a fine powder, and taken in a glass of arrack or brandy.'

This single dose is said to secure the person for thirty days, at the end of which it must be repeated; but if he has any symptoms of the disease, it must be repeated in three hours.

* Though we give this prescription on the credit of Dr Mead, yet we would not advise any person, who has reason to believe that he has been bit by a dog which was really mad, to trust to it alone. Mead was an able physician; but he seems to have been no great philosopher, and was sometimes the dupe of his own credulity.

The following is likewise reckoned a good antispasmodic medicine:

'Take of Virginian snake-root in powder half a dram, gum asafœtida twelve grains, gum camphire seven grains; make these into a bolus with a little syrup of saffron.'

Camphire may also be given in the following manner:

'Take purified nitre half an ounce. Virginian snake-root in powder two drams, camphire one dram; rub them together in a mortar, and divide the whole into ten doses.'

Mercury is likewise recommended as of great efficacy both in the prevention and cure of this kind of madness. When used as a preventive, it will be sufficient to rub daily a dram of the ointment into the parts about the wound.

Vinegar is likewise of considerable service, and should be taken freely, either in the patient's food or drink.

These are the principal medicines recommended for preventing the effects of the bite of a mad dog. We would not, however, advise people to trust to any one of them; but from a proper combination of their different powers, there is the greatest reason to hope for success.

The great error in the use of these medicines lies in not taking them for a sufficient length of time. They are used more like charms, than medicines intended to produce any change in the body. To this, and not to the insufficiency of the medicines, we must impute their frequent want of success.

Dr Mead says, that the virtue of his medicine consists in promoting urine. But how a poison should be expelled by urine, with only three or four doses of any medicine, however powerful, it is not easy to conceive. More time is certainly necessary, even though the medicine were more powerful than that which the Doctor prescribes.

The East-India specific is still more exceptionable on this account.

As these and most other medicines, taken singly, have frequently been found to fail, we shall recommend the following course:

If a person be bit in a fleshy part, where there is no hazard of hurting any large blood-vessel, the parts adjacent to the wound may be cut away. But if this be not done soon after the bite has been received, it will be better to omit it.

The wound may be dressed with salt and water, or a

pickle made of vinegar and salt, and afterwards dressed twice a-day with yellow basilicon mixed with red precipitate of mercury.

The patient should begin to use either Dr Mead's medicine, or some of the others mentioned above. If he takes Mead's medicine, he may use it, as the Doctor directs, for four days successively. Let him then omit it for two or three days, and again repeat the same number of doses as before.

During this course, he must rub into the parts about the wound, daily, one dram of the mercurial ointment. This may be done for ten or twelve days at least.

When this course is over, he may take a purge or two, and wait a few days till the effect of the mercury be gone off. He must then begin to use the cold bath, into which he may go every morning for five or six weeks. If he should feel cold and chilly for a long time after coming out of the cold bath, it will be better to use a tepid one, or to have the water a little warmed.

In the mean time, we would advise him not to leave off all internal medicines, but to take either one of the boluses of snake-root, asafœtida, and camphire; or one of the powders of nitre, camphire, and snake-root, twice a-day. These may be used the whole time he is bathing.

During the use of the mercurial ointment, the patient must keep within doors, and take nothing cold.

A proper regimen must be observed throughout the whole course. The patient should abstain from flesh, and all salted and high-seasoned provisions. He must avoid strong liquors, and live mostly upon a light and rather spare diet. His mind should be kept as easy and cheerful as possible, and all excessive heat and violent passions avoided with the utmost care.

I have never seen this course of medicine, with proper regimen, fail to prevent hydrophobia; and cannot help again observing, that the want of success must generally be owing either to the application of improper medicines, or not using proper ones for a sufficient length of time.

Mankind are extremely fond of every thing that promises a sudden or miraculous cure. By trusting to these, they often lose their lives, when a regular course of medicine would have rendered them absolutely safe. This holds re-

markably in the present case. Numbers of people, for example, believe, if they or their eattle were once dipped in the sea, it is sufficient; as if the salt water were a charm against the effeets of the bite. This, and such like whims, have proved fatal to many.

It is a common notion, if a person be bit by a dog which is not mad, that, if he should go mad afterwards, the person would be affected with the disorder at the same time; but this notion is too ridiculous to deserve a serious consideration. It is a good rule, however, to avoid dogs as much as possible, as the disease is often upon them for some time before its violent symptoms appear. The hydrophobia has been occasioned by the bite of a dog which shewed no other symptoms of the disease, but listlessness and a sullen disposition.

Though we do not mean to treat fully of the cure of the hydrophobia, yet we are far from reckoning it incurable. The notion that this disease could not be cured, has been productive of the most horrid consequences. It was usual either to abandon the unhappy persons, as soon as they were seized with the disease, to their fate, to bleed them to death, or to suffocate them between mattresses or feather beds, &c. This conduct certainly deserved the severest punishment. We hope, for the honour of human nature, it will never again be heard of.

I have never had an opportunity of treating this disease, and therefore can say nothing of it from my own experience; but the learned Dr Tissot says, it may be cured in the following manner:

1. The patient must be bled to a considerable quantity; and this may be repeated twice, or thrice, or even a fourth time, if circumstances require it.

2. The patient should be put, if possible, into a warm bath; and this should be used twice a-day.

3. He should every day receive two, or even three emollient clysters.

4. The wound, and the parts adjoining to it, should be rubbed with mercurial ointment twice a-day.

5. The whole limb which contains the wound should be rubbed with oil, and be wrapped up in an oily flannel.

6. Every three hours a dose of Cob's powder should be taken in a cup of the infusion of lime-tree and elder-flowers.

This powder is made by rubbing together in a mortar, to a very fine powder, of native and factitious cinnabar, each twenty-four grains; of musk, sixteen grains.*

7. The following bolus is to be given every night, and to be repeated in the morning, if the patient be not easy, washing it down with the infusion mentioned above: Take one dram of Virginian snake-root in powder; of camphire and asafœtida, ten grains each; of opium, one grain; and with a sufficient quantity of conserve, or rob of elder, make a bolus.

8. If there be a great nausea at the stomach, with a bitterness in the mouth, thirty-five or forty grains of ipecacuanha, in powder, may be taken for a vomit.

9. The patient's food, if he takes any, must be light; as panado, soups made of farinaceous or mealy vegetables, &c.

10. If the patient should long continue weak, and subject to terrors, he may take half a dram of the Peruvian bark thrice a-day.

The next poisonous animal which we shall mention is the VIPER. The grease of this animal rubbed into the wound, is said to cure the bite. Though that is all the viper-catchers generally do when bit, we should not think it sufficient for the bite of an enraged viper. It would surely be more safe to have the wound well sucked,† and afterwards rubbed with warm salad-oil. A poultice of bread and milk, softened with salad-oil, should likewise be applied to the wound; and the patient ought to drink freely of vinegar-whey, or water-gruel with vinegar in it, to make him sweat. Vinegar is one of the best medicines which can be used in

* The Ormskirk medicine, as it is called, seems to me to consist chiefly of cinnabar. Though it is said to be infallible as a preventive, yet I would not advise any one to trust to it alone. Indeed, it is ordered to be taken in a manner which gives it more the appearance of a charm than of a medicine. Surely, if a medicine is to produce any change in the body, it must be taken for some considerable time, and in sufficient quantity.

† The practice of sucking out poisons is very ancient; and indeed nothing can be more rational. Where the bite cannot be cut out, this is the most likely way for extracting the poison. There can be no danger in performing this office, as the poison does no harm, unless it be taken into the body by a wound. The person who sucks the wound ought, however, to wash his mouth frequently with salad-oil, which will secure him from even the least inconveniency. The *Psylli* in Africa, and the *Marsi* in Italy, were famed for curing the bites of poisonous animals, by sucking the wound; and we are told, that Indians in North America practise the same at this day.

any kind of poison, and ought to be taken very liberally. If the patient be sick, he may take a vomit. This course will be sufficient to cure the bite of any of the poisonous animals of this country.

With regard to poisonous insects, as the bee, the wasp, the hornet, &c. their stings are seldom attended with danger, unless when a person happens to be stung by a great number of them at the same time; in which case something should be done to abate the inflammation and swelling. Some, for this purpose, apply honey; others lay pounded parsley to the part. A mixture of vinegar and Venice treacle is likewise recommended; but I have found rubbing the part with warm salad-oil, or frequently repeated applications of pledgits dipped in laudanum succeed very well. Indeed, when the stings are so numerous as to endanger the patient's life, which is sometimes the case, he must not only have oily poultices, or pledgits moistened with laudanum applied to the part, but should likewise be bled, and take some cooling medicines, as nitre, or cream of tartar, and should drink plentifully of diluting liquors.

It is the happiness of this island to have very few poisonous animals, and those which we have are by no means of the most virulent kind. Nine-tenths of the effects attributed to poison or venom in this country, are really other diseases, and proceed from quite different causes.

We cannot, however, make the same observation with regard to poisonous vegetables. These abound every where, and prove often fatal to the ignorant and unwary. This indeed is chiefly owing to carelessness. Children ought early to be cautioned against eating any kind of fruit, roots, or berries, which they do not know; and all poisonous plants to which they can have access, ought, as far as possible, to be destroyed. This would not be so difficult a task as some people imagine.

Poisonous plants have no doubt their use, and they ought to be propagated in proper places; but, as they prove often destructive to cattle, they should be rooted out of all pasture-grounds. They ought likewise, for the safety of the human species, to be destroyed in the neighbourhood of all towns and villages; which, by the bye, are the places where they most commonly abound. I have seen the poisonous hemlock, henbane, wolfsbane, and deadly night-shade, all

growing within the environs of a small town, where, though several persons, within the memory of those living in it, had lost their lives by one or other of these plants, yet no method, that I could hear of, had ever been taken to root them out; though this might be done at a very trifling expence.

Seldom a year passes, but we have accounts of several persons poisoned by eating hemlock-root, instead of parsnips, or some kind of fungus which they had gathered for mushrooms. These examples ought to put people upon their guard with respect to the former, and to put the latter entirely out of use. Mushrooms may be a delicate dish; but they are a dangerous one, as they are generally gathered by persons who do not know one kind of fungus from another, and take every thing for a mushroom which has that appearance.

We might here mention many other plants and animals of a poisonous nature, which are found in foreign countries; but, as our observations are chiefly intended for this island, we shall pass these over. It may not, however, be amiss to observe, for the benefit of such of our countrymen as go to America, that an effectual remedy is now said to be found for the bite of the rattle-snake.—The prescription is as follows: Take of the herbs plaintain and horehound, in summer, roots and branches together, a sufficient quantity; bruise them in a mortar, and squeeze out the juice, of which give, as soon as possible, one large spoonful; if the patient be swelled you must force it down his throat. This generally will cure; but if he finds no relief in an hour after, you may give another spoonful, which never fails.—If the roots are dried, they must be moistened with a little water. To the wound may be applied a leaf of good tobacco moistened with rum.

We give this upon the faith of Dr Brookes, who says it was the invention of a negro; for the discovery of which he had his freedom purchased, and a hundred pounds *per annum* settled upon him during life, by the General Assembly of Carolina.

It is possible there may be in nature specific remedies for every kind of poison; but as we have very little faith in any of those which have yet been pretended to be discovered, we shall beg leave again to recommend the most strict attention to the following rules, *viz.* That when any poisonous sub-

stance has been taken into the stomach, it ought as soon as possible to be discharged by vomits, clysters, and purges; and, when poison has been received into the body by a wound, that it be expelled by medicines which promote the different secretions, especially those of sweat, urine, and insensible perspiration; to which may be joined antispasmodics, or such medicines as take off tension and irritation; the chief of which are opium, musk, camphire, and asafœtida.

CHAP. XLVII.

OF THE VENEREAL DISEASE.

In the first edition of this book, the venereal disease was omitted. The reasons, however, which at that time induced me to leave it out, have, upon more mature consideration, vanished. Bad consequences, no doubt, may arise from ignorant persons tampering with medicine in this disorder; but the danger from that quarter seems to be more than balanced by the great and solid advantages which must arise to the patient from an early knowledge of his case, and an attention to a plan of regimen, which, if it does not cure the disease, will be sure to render it more mild, and less hurtful to the constitution.

It is peculiarly unfortunate for the unhappy person who contracts this disease, that it lies under a sort of disgrace. This renders disguise necessary, and makes the patient either conceal his disorder altogether, or apply to those who promise a sudden and secret cure; but who, in fact, only remove the symptoms for a time, while they fix the disease deeper in the habit. By this means a slight infection, which might have been easily removed, is often converted into an obstinate, and sometimes incurable malady.

Another unfavourable circumstance attending this disease is, that it assumes a variety of different shapes, and may with more propriety be called an assemblage of diseases, than a single one. No two diseases can require a more different method of treatment than this does in its different stages. Hence the folly and danger of trusting to any particular nostrum for the cure of it. Such nostrums are, however, generally administered in the same manner

to all who apply for them, without the least regard to the state of the disease, the constitution of the patient, the degree of infection, and a thousand other circumstances of the utmost importance.

Though the venereal disease is generally the fruit of unlawful embraces, yet it may be communicated to the innocent as well as the guilty. Infants, nurses, midwives, and married women whose husbands lead dissolute lives, are often affected with it, and frequently lose their lives by not being aware of their danger in due time. The unhappy condition of such persons will certainly plead our excuse, if any excuse be necessary, for endeavouring to point out the symptoms and cure of this too common disease.

To enumerate all its different symptoms, however, and to trace the disease minutely through its various stages, would require a much larger space than falls to this part of my subject; I shall therefore confine my observations chiefly to circumstances of importance, omitting such as are either trifling, or which occur but seldom. I shall likewise pass over the history of the disease, with the different methods of treatment which it has undergone since it was first introduced into Europe, and many other circumstances of a similar nature; all of which, though they might tend to amuse the reader, yet could afford him little or no useful knowledge.

OF THE VIRULENT GONORRHŒA.

The virulent Gonorrhœa is an involuntary discharge of infectious mucus from the parts of generation in either sex. It generally makes its appearance within eight or ten days after the infection has been received; sometimes indeed, it appears in two or three days, and at other times not before the end of four or five weeks. Previous to the discharge, the patient feels an itching, with a small degree of pain in the genitals. Afterwards a thin glary matter begins to distil from the urinary passage, which stains the linen, and occasions a small degree of titillation, particularly at the time of making water; this gradually increasing, arises at length to a degree of heat and pain, which are chiefly perceived about the extremity of the urinary passage, where a slight degree of redness and inflammation likewise begins to appear.

As the disorder advances, the pain, heat of urine, and

running, increase, while fresh symptoms daily ensue. In men, the erections become painful and involuntary, and are more frequent and lasting than when natural. This symptom is most troublesome when the patient is warm in bed.

The pain which was at first only perceived towards the extremity, now begins to reach all up the urinary passage, and is most intense just after the patient has done making water. The running gradually recedes from the colour of semen, grows yellow, and at length puts on the appearance of mucus.

When the disorder has arrived at its height, all the symptoms are more intense; the heat of urine is so great, that the patient dreads the making water; and though he feels a constant inclination this way, yet it is rendered with the greatest difficulty, and often only by drops: the involuntary erections now become extremely painful and frequent; there is also a pain, heat, and sense of fulness about the seat, and the running is plentiful and sharp, of a brown, greenish, and sometimes of a bloody colour.

By a proper treatment, the violence of the symptoms gradually abates; the heat of urine goes off; the involuntary and painful erections, and the heat and pain about the seat, become easier; the running also gradually decreases, grows whiter and thicker, till at last it entirely disappears.

By attending to these symptoms, the gonorrhœa may be generally distinguished from any other disease. There are, however, some few disorders for which it may be mistaken, as an ulcer in the kidneys or bladder, the *fluor albus*, or whites, in women, &c. But in the former of these, the matter comes away only with the urine, or when the sphincter of the bladder is open; whereas in a gonorrhœa the discharge is constant. The latter is more difficult to distinguish, and must be known chiefly from its effects; as pain, communicating the infection, &c.

Regimen.—When a person has reason to suspect that he has caught the venereal infection, he ought most strictly to observe a cooling regimen, to avoid every thing of a heating nature, as wines, spirituous liquors, rich sauces, spices, salted, high-seasoned, and smoke-dried provisions, particularly salt itself in every shape; as also all aromatic and stimulating vegetables, as onions, garlic, shalot, nutmeg, mus-

tard, cinnamon, mace, ginger, and such like. His food ought to consist chiefly of mild vegetables, milk, broths, light puddings, panado, gruels, &c. His drink may be barley-water, milk and water, decoctions of marsh-mallows and liquorice, linseed-tea, or clear whey. Of these he ought to drink plentifully. Violent exercise of all kinds, especially riding on horseback, and venereal pleasures, are to be avoided. The patient must beware of cold, and when the inflammation is violent, he ought to keep his bed.

MEDICINE.—A virulent gonorrhœa can rarely be cured speedily and effectually at the same time. The patient ought, therefore, not to expect, nor the physician to promise it. It will often continue for two or three weeks, and sometimes for five or six, even where the treatment has been very proper.

Sometimes, indeed, a slight infection may be carried off in a few days, by bathing the parts in warm milk and water, and injecting frequently up the urethra a little sweet oil or linseed tea about the warmth of new milk. Should these not succeed in carrying off the infection, they will at least have a tendency to lessen its virulence.

To effect a cure, however, astringent injections will generally be found necessary. These may be various ways prepared, but I think those made with the white vitriol are both more safe and efficacious. They can be made stronger or weaker as circumstances may require; but it is best to begin with the more gentle, and increase their power if necessary. I generally ordered a dram of white vitriol to be dissolved in eight or nine ounces of common or rose water, and an ordinary syringe full of it to be thrown up three or four times a-day. If this quantity does not perform a cure, it may be repeated, and the dose increased.

Whether injections be used or not, cooling purges are always proper in the gonorrhœa. They ought not, however, to be of the strong or drastic kind. Whatever raises a violent commotion in the body, increases the danger, and tends to drive the disease deeper into the habit. Procuring two or three stools every second or third day for the first fortnight, and the same number every fourth or fifth day for the second, will generally be sufficient to remove the inflammatory symptoms, to diminish the running, and to

change its colour and consistence. It gradually becomes more white and ropy as the virulence abates.*

When the inflammatory symptoms run high, bleeding is always necessary at the beginning. This operation, as in other topical inflammations, must be repeated according to the strength and constitution of the patient, and the vehemence and urgency of the symptoms.

Medicines which promote the secretion of urine are likewise proper in this stage of the disorder. For this purpose an ounce of nitre and two ounces of gum-arabic, pounded together, may be divided into twenty-four doses, one of which may be taken frequently in a cup of the patient's drink. If these should make him pass his urine so often as to become troublesome to him, he may either take them less frequently, or leave out the nitre altogether, and take equal parts of gum-arabic and cream of tartar. These may be pounded together, and a tea-spoonful taken in a cup of the patient's drink four or five times a-day. I have generally found this answer extremely well, both as a diuretic, and for keeping the body gently open.

When the pain and inflammation are seated high, towards the neck of the bladder, it will be proper frequently to throw up an emollient clyster, which, besides the benefit of procuring stools, will serve as a fomentation to the inflamed parts.

Soft poultices, when they can conveniently be applied to the parts, are of great service. They may be made of the

* If the patient can swallow a solution of salts and manna, he may take six drams; or, if his constitution requires it, an ounce of the former, with half an ounce of the latter. These may be dissolved in an English pint of boiling water, whey, or thin water gruel, and taken early in the morning.

If an infusion of senna and tamarinds be more agreeable, two drams of the former, and an ounce of the latter, may be infused all night in an English pint of boiling water. The infusion may be strained next morning, and half an ounce of Glauber's salts dissolved in it. A tea cupful of this infusion may be taken every half hour till it operates.

Should the patient prefer an electuary, the following will be found to answer very well. Take of the lenitive electuary four ounces, cream of tartar two ounces, jalap in powder two drams, rhubarb one dram, and as much of the syrup of pale roses as will serve to make up the whole into a soft electuary. Two or three tea-spoonfuls of this may be taken overnight, and about the same quantity next morning, every day that the patient chooses to take a purge.

The doses of the above medicines may be increased or diminished, according as the patient finds it necessary. We have ordered the salts to be dissolved in a large quantity of water, because it renders their operation more mild.

flour of linseed, or of wheat-bread and milk softened with fresh butter or sweet oil. When poultices cannot be conveniently used, cloths wrung out of warm water, or bladders filled with warm milk and water, may be applied. I have often known the most excruciating pains, during the inflammatory state of the gonorrhœa, relieved by one or other of these applications.

Few things tend more to keep off inflammation in the spermatic vessels, than a proper suspensory for the scrotum. It ought to be so contrived as to support the testicles, and should be worn from the first appearance of the disease, till it has ceased some weeks.

The above treatment will sometimes remove the gonorrhœa so quickly, that the person will be in doubt whether he really laboured under that disease. This, however, is too favourable a turn to be often expected. It more frequently happens, that we are able only to procure an abatement or remission of the inflammatory symptoms, so far as to make it safe to have recourse to the great antidote *mercury*.

Many people, on the first appearance of a gonorrhœa, fly to the use of mercury. This is a bad plan. Mercury is often not at all necessary in a gonorrhœa; and when taken too early, it does mischief. It may be necessary to complete the cure, but can never be proper at the commencement of it.

When bleeding, purging, fomentations, and the other things recommended as above, have eased the pain, softened the pulse, relieved the heat of urine, and rendered the involuntary erections less frequent, the patient may begin to use mercury in any form that is least disagreeable to him.

If he takes the common mercurial pill, two at night and one in the morning will be a sufficient dose at first. Should they affect the mouth too much, the dose must be lessened; if not at all, it may be gradually increased to five or six pills in the day. If calomel be thought preferable, two or three grains of it, formed into a bolus, with a little of the conserve of hips, may be taken at bed-time, and the dose gradually increased to eight or ten grains. One of the most common preparations of mercury now in use is the corrosive sublimate. This may be taken in the manner afterwards recommended under the confirmed lues or pox. I have always

found it one of the most safe and efficacious medicines when properly used.

The above medicines may either be taken every day, or every other day, as the patient is able to bear them. They ought never to be taken in such quantity as to raise a salivation, unless in a very slight degree. The disease may be more safely, and as certainly, cured without a salivation as with it. When the mercury runs off by the mouth, it is not so successful in carrying off the disease, as when it continues longer in the body, and is discharged gradually.

Should the patient be purged or griped in the night by the mercury, he may take half a dram of the opiate confection dissolved in an ounce of cinnamon-water, to prevent bloody stools, which are apt to happen should the patient catch cold, or if the mercury has not been duly prepared. When the bowels are weak and the mercury is apt to gripe or purge, these disagreeable consequences may be prevented by taking with the above pills or bolus, half a dram or two scruples of diascordium, or of the Japonic confection.

To prevent the disagreeable circumstance of the mercury's affecting the mouth too much, or bringing on a salivation, it may be combined with purgatives. With this view the laxative mercurial pill has been contrived, the usual dose of which is half a dram, or three pills night and morning, to be repeated every other day; but the safer way is for the patient to begin with two, or even with one pill, gradually increasing the dose.

To such persons as can neither swallow a bolus nor a pill, mercury may be given in a liquid form, as it can be suspended even in a watery vehicle, by means of gum-arabic; which not only serves this purpose, but likewise prevents the mercury from affecting the mouth, and renders it in many respects a better medicine.*

It happens very fortunately for those who cannot be brought to take mercury inwardly, and likewise for persons whose bowels are too tender to bear it, that an external ap-

* Take quicksilver one dram, gum-arabic reduced to a mucilage two drams; let the quicksilver be rubbed with the mucilage, in a marble mortar, until the globules of mercury entirely disappear; afterwards and gradually, still continuing the trituration, add half an ounce of balsamic syrup, and eight ounces of simple cinnamon-water. Two table spoonfuls of this solution may be taken night and morning. Some reckon this the best form in which quicksilver can be exhibited for the cure of a gonorrhœa.

plication of it will answer equally well, and in some respects better. It must be acknowledged, that mercury, taken inwardly for any length of time, greatly weakens and disorders the bowels; for which reason, when a plentiful use of it becomes necessary, we would prefer rubbing in to the mercurial pills. The common mercurial or blue ointment will answer very well. Of that which is made by rubbing together equal quantities of hogslard and quicksilver, about a dram may be used at a time. The best time for rubbing it in is at night, and the most proper place the inner side of the thighs. The patient should sit before the fire when he rubs, and should wear flannel drawers next his skin at the time he is using the ointment. If ointment of a weaker or stronger kind be used, the quantity must be increased or diminished in proportion.

If, during the use of the ointment, the inflammation of the genital parts, together with the heat and feverishness, should return, or if the mouth should grow sore, the gums tender, and the breath become offensive, a dose or two of Glauber's salts, or some other cooling purge, may be taken, and the rubbing intermitted for a few days. As soon, however, as the signs of spitting are gone off, if the virulency be not quite corrected, the ointment must be repeated, but in smaller quantities, and at longer intervals than before. Whatever way mercury is administered, its use must be persisted in as long as any virulency is suspected to remain.

During this, which may be called the second stage of the disorder, though so strict a regimen is not necessary as in the first or inflammatory state, yet intemperance of every kind must be avoided. The food must be light, plain, and of easy digestion; and the greatest indulgence that may be allowed with respect to drink, is a little wine diluted with a sufficient quantity of water. Spirituous liquors are to be avoided in every shape. I have often known the inflammatory symptoms renewed and heightened, the running increased, and the cure rendered extremely difficult and tedious, by one fit of excessive drinking.

When the above treatment has removed the heat of urine, and soreness of the genital parts; when the quantity of running is considerably lessened, without any pain or swelling in the groin or testicle supervening; when the patient is free from involuntary erections; and lastly, when

the running becomes pale, whitish, thick, void of ill smell, and tenacious or ropy; when all or most of these symptoms appear, the gonorrhœa is arrived at its last stage, and we may gradually proceed to treat it as a gleet with astringent and agglutinating medicines.

OF GLEETS.

A gonorrhœa frequently repeated, or improperly treated, often ends in a gleet, which may either proceed from a relaxation, or from some remains of the disease. It is, however, of the greatest importance in the cure of the gleet, to know from which of these causes it proceeds. When the discharge proves very obstinate, and receives little or no check from astringent remedies, there is ground to suspect that it is owing to the latter; but if the drain is constant, and is chiefly observable when the patient is stimulated by lascivious ideas, or upon straining to go to stool, we may reasonably conclude that it is chiefly owing to the former.

In the cure of a gleet proceeding from relaxation, the principal design is to brace and restore a proper degree of tension to the debilitated and relaxed vessels. For this purpose, besides the medicines recommended in the gonorrhœa, the patient may have recourse to stronger and more powerful astringents, as the Peruvian bark,* alum, vitriol, galls, tormentil, bistort, ballustines, tincture of gum kino, &c. The injections may be rendered more astringent by the addition of a few grains of alum, or increasing the quantity of vitriol as far as the parts are able to bear it.

The last remedy which we shall mention in this case, is the cold bath, than which there is not perhaps a more powerful bracer in the whole compass of medicine. It ought never to be omitted in this species of gleet, unless there be something in the constitution of the patient which renders the use of it unsafe. The chief objections to the use of the cold bath are a full habit, and an unsound state of the viscera.

* The Peruvian bark may be combined with other astringents, and prepared in the following manner:

Take of Peruvian bark bruised six drams, of fresh galls bruised two drams; boil them in a pound and a half of water to a pound: to the strained liquor add three ounces of the simple tincture of the bark. A small tea-cupful of this may be taken three times a-day, adding to each cup fifteen or twenty drops of the acid elixir of vitriol.

The danger from the former may always be lessened, if not removed, by purging and bleeding; but the latter is an insurmountable obstacle, as the pressure of the water, and the sudden contraction of the external vessels, by throwing the blood with too much force upon the internal parts, are apt to occasion ruptures of the vessels, or a flux of humours upon the diseased organs. But where no objections of this kind prevail, the patient ought to plunge over head in water every morning fasting, for three or four weeks together. He should not, however, stay long in the water, and should take care to have his skin dried as soon as he comes out.

The regimen proper in this case is the same as was mentioned in the last stage of the gonorrhœa: the diet must be drying and astringent, and the drink Spa, Pyrmont, or Bristol waters, with which a little claret or red wine may sometimes be mixed. Any person may now afford to drink these waters, as they can be every where prepared at almost no expense, by a mixture of common chalk and oil of vitriol.

When the gleet does not in the smallest degree yield to these medicines, there is reason to suspect that it proceeds frem ulcers. In this case recourse must be had to mercury, and such medicines as tend to correct any predominant acrimony with which the juices may be affected, as the decoction of China, sarsaparilla, sassafras, or the like.

Mr Fordyce says he has seen many obstinate gleets, of two, three, or four years standing, effectually cured by a mercurial inunction, when almost every other medicine has been tried in vain. Dr Chapman seems to be of the same opinion; but says, he has always found the mercury succeed best in this case when joined with terebinthinate and other agglutinating medicines. For which reason the Doctor recommends pills made of calomel and Venice turpentine;* and desires that their use may be accompanied with a decoction of guaiacum or sarsaparilla.

The last kind of remedy which we shall mention for the cure of ulcers in the urinary passage, are the suppurating candles or bougies. As these are prepared various ways, and are generally to be bought ready made, it is needless

* Take Venice Turpentine, boiled to a sufficient degree of hardness, half an ounce, calomel half a dram: Let these be mixed and formed into sixty pills, of which five or six may be taken night and morning. If during the use of these pills the mouth should grow sore, or the breath become offensive, they must be discontinued till these symptoms disappear.

to spend time in enumerating the different ingredients of which they are composed, or teaching the manner of preparing them. Before a bougie be introduced into the urethra, however, it should be smeared all over with sweet oil, to prevent it from stimulating too suddenly. It may be suffered to continue in from one to seven or eight hours, according as the patient can bear it. Obstinate ulcers are not only often healed, but tumours and excrescences in the urinary passages taken away, and an obstruction of urine removed, by means of bougies. Obstinate gleets may be removed by the use of bougies.

OF THE SWELLED TESTICLE.

The swelled testicle may either proceed from infection lately contracted, or from the venereal poison lurking in the body; the latter indeed is not very common, but the former frequently happens both in the first and second stages of a gonorrhœa; particularly when the running is unseasonably checked, by cold, hard drinking, strong drastic purges, violent exercise, the too early use of astringent medicines, or the like.

In the inflammatory stage, bleeding is necessary, which must be repeated according to the urgency of the symptoms.* The food must be light, and the drink diluting. High-seasoned food, flesh, wines, and every thing of a heating nature, are to be avoided. Fomentations are of singular service. Poultices of bread and milk, softened with fresh butter or oil, are likewise very proper, and ought constantly to be applied when the patient is in bed; when he is up, the testicles should be kept warm, and supported by a suspensory, which may easily be contrived in such a manner as to prevent the weight of the testicle from having any effect.

If it should be found impracticable to clear the testicle by the cooling regimen now pointed out, and extended according to circumstances, it will be necessary to lead the patient through such a complete antivenereal course as shall ensure him against any future uneasiness. For this purpose,

* I have been accustomed for some time past to apply leeches to inflamed testicles, which practice has always been followed with the most happy effects.

besides rubbing the mercurial ointment on the thighs as directed in the gonorrhœa, the patient must be confined to bed, if necessary, for five or six weeks, suspending the testicle, all the while, with a bag or truss, and plying him inwardly with strong decoctions of sarsaparilla.

When these means do not succeed, and there is reason to suspect a scrophulous or cancerous habit, either of which may support a schirrous induration, after the venereal poison is corrected, the parts should be fomented daily with a decoction of hemlock, the bruised leaves of which may likewise be added to the poultice, and the extract at the same time taken inwardly.* This practice is strongly recommended by Dr Storck in schirrous and cancerous cases; and Mr Fordyce assures us, that by this method he has cured diseased testicles of two or three years standing, even when ulcerated, and when the schirrus had begun to be affected with pricking and lancing pains.

OF BUBOES.

Venereal buboes are hard tumours seated in the groin, occasioned by the venereal poison lodged in this part. They are of two kinds, viz. such as proceed from a recent infection, and such as accompany a confirmed lues.

The cure of recent buboes, that is, such as appear soon after impure coition, may be first attempted by *dispersion*; and, if that should not succeed, by *suppuration*. To promote the dispersion of a bubo, the same regimen must be observed as was directed in the first stage of a gonorrhœa. The patient must likewise be bled, and take some cooling purges, as the decoction of tamarinds and senna, Glauber's salts, and the like. If by this course the swelling and other inflammatory symptoms abate, we may safely proceed to the use of mercury, which must be continued till the venereal virus is quite subdued.†

But if the bubo should, from the beginning, be attended with great heat, pain, and pulsation, it will be proper to promote its suppuration. For this purpose the patient may

* The extract of hemlock may be made into pills, and taken in the manner directed under the article Cancer.

† For the dispersion of a bubo, a number of leeches applied to the part affected will be found equally efficacious as in the inflamed testicle.

be allowed to use his ordinary diet, and to take now and then a glass of wine. Emollient cataplasms, consisting of bread and milk softened with oil or fresh butter, may be applied to the part; and, in cold constitutions, where the tumour advances slowly, white lily roots boiled, or sliced onions raw, and a sufficient quantity of yellow basilicon, may be added to the poultice.

When the tumour is ripe, which may be known by its conical figure, the softness of the skin, and a fluctuation of the matter plainly to be felt under the finger, it may be opened either by caustic or a lancet, and afterwards dressed with digestive ointment.

It sometimes, however, happens, that buboes can neither be dispersed nor brought to a suppuration, but remain hard indolent tumours. In this case the indurated glands must be consumed by caustic; if they should become schirrons, they must be dissolved by the application of hemlock, both externally and internally, as directed in the schirrous testicle.

OF CHANCRES.

Chancres are superficial, callous, eating ulcers; which may happen either with or without a gonorrhœa. They are commonly seated about the glans, and make their appearance in the following manner: First a little red pimple arises, which soon becomes pointed at top, and is filled with a whitish matter inclining to yellow. This pimple is hot, and itches generally before it breaks; afterwards it degenerates into an obstinate ulcer, the bottom of which is usually covered with a viscid mucus, and whose edges gradually become hard and callous. Sometimes the first appearance resembles a simple excoriation of the cuticle; which, however, if the cause be venereal, soon becomes a true chancre.

A chancre is sometimes a primary affection, but it is much oftener symptomatic, and is the mark of a confirmed lues. Primary chancres discover themselves soon after impure coition, and are generally seated in parts covered with a thin cuticle, as the lips, the nipples of women, the *glans penis* of men, &c.*

* When venereal ulcers are seated in the lips, the infection may be communicated by kissing. I have seen very obstinate venereal ulcers in the

When a chancre appears soon after impure coition, its treatment is nearly similar to that of the virulent gonorrhœa. The patient must observe the cooling regimen, lose a little blood, and take some gentle doses of salts and manna. The parts affected ought frequently to be bathed, or rather soaked, in warm milk and water; and if the inflammation be great, an emollient poultice or cataplasm may be applied to them. This course will, in most cases, be sufficient to abate the inflammation, and prepare the patient for the use of mercury.

Symptomatic chancres are commonly accompanied with ulcers in the throat, nocturnal pains, scabby eruptions about the roots of the hair, and other symptoms of a confirmed lues. Though they may be seated in any of the parts mentioned above, they commonly appear upon the private parts, or the inside of the thigh. They are also less painful, but frequently much larger and harder than primary chancres. As their cure must depend upon that of the pox, of which they are only a symptom, we shall take no further notice of them till we come to treat of a confirmed lues.*

Thus we have related most of the symptoms which accompany or succeed a violent gonorrhœa, and have also given a short view of their proper treatment; there are, however, several others which sometimes attend this disease, as a *strangury* or obstruction of urine, a *phymosis*, *paraphymosis*, &c.

A strangury may be occasioned either by a spasmodic constriction, or an inflammation of the urethra and parts about the neck of the bladder. In the former case the patient begins to void his urine with tolerable ease; but, as soon as it touches the galled or inflamed urethra, a sudden constriction takes place, and the urine is voided by spurts, sometimes by drops only. When the strangury is owing

lips, which I have all the reason in the world to believe were communicated in this manner.

Nurses ought to beware of suckling infected children, or having their breasts drawn by persons tainted with the venereal disease. This caution is peculiarly necessary for nurses who reside in the neighbourhood of great towns.

* I have found it answer extremely well to sprinkle chancres twice a-day with calomel. This will often perform a cure without any other application whatever. If the chancres are upon the *glans*, they may be washed with milk and water a little warm, and afterwards the calomel may be applied as above.

to an inflammation about the neck of the bladder, there is a constant heat and uneasiness of the part, a perpetual desire to make water, while the patient can only render a few drops, and a troublesome *tenesmus*, or constant inclination to go to stool.

When the strangury is owing to spasm, such medicines as tend to dilute and blunt the salts of the urine will be proper. For this purpose, besides the common diluting liquors, soft and cooling emulsions, sweetened with the syrup of poppies, may be used. Should these not have the desired effect, bleeding and emollient fomentations will be necessary.

When the complaint is evidently owing to an inflammation about the neck of the bladder, bleeding must be more liberally performed, and repeated according to the urgency of the symptoms. After bleeding, if the strangury still continues, soft clysters, with a proper quantity of laudanum in them, may be administered, and emollient fomentations applied to the region of the bladder. At the same time, the patient may take every four hours a tea-cupful of barley-water, to an English pint of which six ounces of the syrup of marsh-mallows, four ounces of the oil of sweet almonds, and half an ounce of nitre, may be added. If these remedies should not relieve the complaint, and a total suppression of urine should come on, bleeding must be repeated, and the patient set in a warm bath up to the middle. It will be proper in this case to discontinue the diuretics, and to draw off the water with a catheter; but as the patient is seldom able to bear its being introduced, we would rather recommend the use of mild bougies. These often lubricate the passage, and greatly facilitate the discharge of urine. Whenever they begin to stimulate or give any uneasiness, they may be withdrawn.

The *phymosis* is such a constriction of the prepuce over the glans, as hinders it from being drawn backwards; the *paraphymosis*, on the contrary, is such a constriction of the prepuce behind the glans, as hinders it from being brought forward.

The treatment of these symptoms is so nearly the same with that of the virulent gonorrhœa, that we have no occasion to enlarge upon it. In general, bleeding, purging, poultices, and emollient fomentations, are sufficient. Should these, however, fail of removing the stricture, and the parts

be threatened with a mortification, twenty or thirty grains of ipecacuanha and one grain of emetic tartar may be given for a vomit, and may be worked off with warm water or thin gruel.

It sometimes happens, that in spite of all endeavours to the contrary, the inflammation goes on, and symptoms of a beginning mortification appear. When this is the case, the prepuce must be scarified with a lancet, and, if necessary, divided, in order to prevent a strangulation, and set the imprisoned glans at liberty. We shall not describe the manner of performing this operation, as it ought always to be done by a surgeon. When a mortification has actually taken place, it will be necessary, besides performing the above operations, to foment the parts frequently with cloths wrung out of a strong decoction of camomile-flowers and bark, and to give the patient a dram of the bark in powder every two or three hours.

With regard to the *priapism*, *chordee*, and other distortions of the *penis*, their treatment is no way different from that of the gonorrhœa. When they prove very troublesome, the patient may take a few drops of laudanum at night, especially after the operation of a purgative through the day.

OF A CONFIRMED LUES.

We have hitherto treated of those affections in which the venereal poison is supposed to be confined chiefly to the particular part by which it was received, and shall next take a view of the lues in its confirmed state; that is, when the poison is actually received into the blood, and circulating with it through every part of the body, mixes with the several secretions, and renders the whole habit tainted.

The symptoms of a confirmed lues are, buboes in the groin, pains of the head and joints, which are peculiarly troublesome in the night, or when the patient is warm in bed: scabs and scurfs in various parts of the body, especially on the head, of a yellowish colour, resembling a honeycomb; corroding ulcers in various parts of the body, which generally begin about the throat, from whence they creep gradually, by the palate, towards the cartilage of the nose, which they destroy; excrescences or exostoses arise in the middle of the bones, and their spungy ends become brittle

and break upon the least accident; at other times they are soft and bend like wax; the conglobate glands become hard and callous, and form in the neck, armpits, groin, and mesentery, hard moveable tumours, like the king's-evil; tumours of different kinds are likewise formed in the lymphatic vessels, tendons, ligaments, and nerves, as the *gummata*, *ganglia*, *nodes*, *tophs*, &c.; the eyes are affected with itching, pain, redness, and sometimes with total blindness, and the ears with a singing noise, pain, and deafness, whilst their internal substance is exulcerated and rendered carious; at length all the animal, vital, and natural functions are depraved; the face becomes pale and livid; the body emaciated and unfit for motion, and the miserable patient falls into an atrophy, or wasting consumption.

Women have symptoms peculiar to the sex; as cancers of the breast; a suppression or overflowing of the menses; the whites; hysteric affections; an inflammation, abscess, schirrus, gangrene, cancer or ulcer of the womb; they are generally either barren or subject to abortion; or if they bring children into the world, they have universal erysipelas, are half rotten, and covered with ulcers.

Such is the catalogue of symptoms attending this dreadful disease in its confirmed state. Indeed, they are seldom all to be met with in the same person, or at the same time; so many of them, however, are generally present as are sufficient to alarm the patient; and if he has reason to suspect the infection is lurking in his body, he ought immediately to set about the expulsion of it, otherwise the most tragical consequences will ensue.

The only certain remedy hitherto known in Europe, for the cure of this disease, is mercury, which may be used in a great variety of forms, with nearly the same success. Some time ago it was reckoned impossible to cure a confirmed lues without a salivation. This method is now, however, pretty generally laid aside, and mercury is found to be as efficacious, or rather more so, in expelling the venereal poison, when administered in such a manner as not to run off by the salivary glands.

Though many are of opinion that the mercurial ointment is as efficacious as any other preparation of that mineral, yet experience has taught me to think otherwise. I have often seen the most obstinate venereal cases, where great quanti-

ties of mercurial ointment had been used in vain, yield to the saline preparations of mercury. Nor am I singular in this opinion. Mr Clare, an eminent surgeon of this city, assures me, that for some time past he has employed in venereal cases a saline preparation of mercury with most happy success. This preparation, rubbed with a sufficient quantity of any mild powder, he applies, in small portions, to the tongue, where, with a gentle degree of friction, it is immediately absorbed, and produces its full effect upon the system, without doing the least injury to the stomach or bowels; a matter of the greatest importance in the application of this most active and powerful remedy.

It is impossible to ascertain either the exact quantity of medicines that must be taken, or the time they ought to be continued, in order to perform a cure. These will ever vary according to the constitution of the patient, the season of the year, the degree of infection, the time it has lodged in the body, &c. But though it is difficult, as Astruc observes, to determine *a priori*, what quantity of mercury will, in the whole, be necessary to cure this distemper completely; yet it may be judged of *a posteriori*, from the abatement and ceasing of the symptoms. The same author adds, that commonly not less than two ounces of the strong mercurial ointment is sufficient, and not more than three or four ounces necessary.

The only chemical preparation of mercury which we shall take notice of, is the corrosive sublimate. This was some time ago brought into use for the venereal disease in Germany, by the illustrious Baron Van Swieten; and was soon after introduced into Britain by the learned Sir John Pringle, at that time physician to the army. The method of giving it is as follows: One grain of corrosive sublimate is dissolved in two ounces of French brandy or malt spirits; and of this solution an ordinary table-spoonful, or the quantity of half an ounce, is to be taken twice a-day, and to be continued as long as any symptoms of the disorder remain. To those whose stomach cannot bear the solution, the sublimate may be given in form of a pill.*

* The sublimate may be given in distilled water, or any other liquid that the patient chooses. I commonly order ten grains to be dissolved in an ounce of the spirit of wine, for the conveniency of carriage, and let the patient take twenty or thirty drops of it night and morning, in half a glass of brandy or other spirits.

Several roots, woods, and barks, have been recommended for curing the venereal disease; but none of them have been found, upon experience, to answer the high encomiums which had been bestowed upon them. Though no one of these is to be depended upon alone, yet, when joined with mercury, some of them are found to be very beneficial in promoting a cure. One of the best we know yet is sarsaparilla.

The mezereon-root is likewise found to be a powerful assistant to the sublimate, or any other mercurial. It may either be used along with the sarsaparilla, or by itself. Those who choose to use the mezereon by itself, may boil an ounce of the fresh bark, taken from the root, in twelve English pints of water to eight, adding towards the end an ounce of liquorice.

We have been told, that the natives of America cure the venereal disease, in every stage, by a decoction of the root of a plant called the Lobelia. It is used either fresh or dried; but we have no certain accounts with regard to the proportion. Sometimes they mix other roots with it, as those of the ranunculus, the ceanothus, &c.; but whether these are designed to disguise or assist it, is doubtful. The patient takes a large draught of the decoction early in the morning, and continues to use it for his ordinary drink through the day.*

Many other roots and woods might be mentioned which have been extolled for curing the venereal disease, as the china-root, the roots of soap-wort, burdock, &c. as also the wood of guaiacum and sassafras; but as none of these have been found to possess virtues superior to those already men-

* Though we are still very much in the dark with regard to the method of curing this disease among the natives of America, yet it is generally affirmed that they do cure it with speed, safety, and success, and that without the least knowledge of mercury. Hence it becomes an object of considerable importance to discover their method of cure. This might surely be done by making trials of the various plants which are found in those parts, and particularly of such as the natives are known to make use of. All people in a rude state take their medicines chiefly from the vegetable kingdom, and are often possessed of valuable secrets with regard to the virtues of plants, of which more enlightened nations are ignorant. Indeed, we make no doubt but some plants of our own growth, were proper pains taken to discover them, would be found as efficacious in curing the venereal disease as those of America. It must, however, be remembered, that what will cure the venereal disease in one country, will not always be found to have equal success in another.

tioned, we shall, for the sake of brevity, pass them over, and shall conclude our observations on this disease, with a few general remarks concerning the proper management of the patient, and the nature of the infection.

GENERAL OBSERVATIONS.

The condition of the patient ought always to be considered, previous to his entering upon a course of mercury in any form. It would be equally rash and dangerous to administer mercury to a person labouring under any violent acute disease, as a putrid fever, pleurisy, peripneumony, or the like. It would likewise be dangerous in some chronic cases ; as a slow hectic fever, or the last stage of a consumption. Sometimes, however, these diseases proceed from a confirmed lues ; in which case it will be necessary to give mercury. In chronic diseases of a less dangerous nature, as the asthma, the gravel, and such like, mercury, if necessary, may be safely administered. If the patient's strength has been greatly exhausted by sickness, labour, abstinence, or any other cause, the use of mercury must be postponed, till by time, rest, and a nourishing diet, it can be sufficiently restored.

Mercury ought not to be administered to women during the menstrual flux, or when the period is near at hand. Neither should it be given in the last stage of pregnancy. If, however, the woman be not near the time of her delivery, and circumstances render it necessary, mercury may be given, but in smaller doses and at greater intervals than usual : with these precautions, both the mother and child may be cured at the same time ; if not, the disorder will at least be kept from growing worse, till the woman be brought to bed, and sufficiently recovered, when a more effectual method may be pursued, which, if she suckles her child, will in all probability be sufficient for the cure of both.

Mercury ought always to be administered to infants with the greatest caution. Their tender condition unfits them for supporting a salivation, and makes it necessary to administer even the mildest preparations of mercury to them with a sparing hand. A similar conduct is recommended in the treatment of old persons, who have the misfortune to labour under a confirmed lues. No doubt the infirmities of age

must render people less able to undergo the fatigues of a salivation; but this, as was formerly observed, is never necessary; besides, we have generally found that mercury had much less effect upon very old persons, than on those who were younger.

Hysteric and hypochondriac persons, and such as are subject to an habitual diarrhœa or dysentery, or to frequent and violent attacks of the epilepsy, or who are afflicted with the scrophula or the scurvy, ought to be cautious in the use of mercury. Where any one of these disorders prevails, it ought either, if possible, to be cured, or at least palliated, before the patient enters upon a course of mercury. When this cannot be done, the mercury must be administered in smaller doses, and at longer intervals than usual. The most proper seasons for entering upon a course of mercury, are the spring and autumn, when the air is of a moderate warmth. If the circumstances of the case, however, will not admit of delay, we must not defer the cure on account of the season, but must administer the mercury; taking care, at the same time, to keep the patient's chamber warmer or cooler, according as the season of the year requires.

The next thing to be considered is the preparation necessary to be observed before we proceed to administer a course of mercury. Some lay great stress upon this circumstance, observing, that by previously relaxing the vessels, and correcting any disorder which may happen to prevail in the blood, not only the mercury will be disposed to act more kindly, but many other inconveniences will be prevented.

We have already recommended bleeding and gentle purges previous to the administration of mercury, and shall only now add, that these are always to be repeated according to the age, strength, constitution, and other circumstances of the patient. Afterwards, if it can be conveniently done, the patient ought to bathe once or twice a-day, for a few days, in lukewarm water. His diet, in the meantime, must be light, moist, and cooling. Wine, and all heating liquors, also violent bodily exercise, and all great exertions of the mind, are carefully to be avoided.

A proper regimen is likewise to be observed by such as are under a course of mercury. Inattention to this not only endangers the patient's life, but often also disappoints him of a cure. A much smaller quantity of mercury will be suf-

ficient for the cure of a person who lives low, keeps warm, and avoids all manner of excess, than of one who cannot endure to put the smallest restraint upon his appetites; indeed, it but rarely happens that such are thoroughly cured.

There is hardly any thing of more importance, either for preventing or removing venereal infection, than cleanliness. By an early attention to this, the infection might often be prevented from entering the body; and where it has already taken place, its effects may be greatly mitigated. The moment any person has reason to suspect that he has received the infection, he ought to wash the parts with water and spirits, sweet oil, or milk and water; a small quantity of the last may likewise be injected up the urethra, if it can be conveniently done. Whether this disease at first took its rise from dirtiness, is hard to say; but wherever that prevails, the infection is found in its greatest degree of virulence, which gives ground to believe that a strict attention to cleanliness would go far towards extirpating it altogether.*

When the venereal disease has been neglected, or improperly treated, it often becomes a disorder of the habit. In this case, the cure must be attempted by restoratives, as a milk diet, the decoction of sarsaparilla, and such like, to which mercury may be occasionally added. It is a common practice in North Britain to send such patients to drink

I have not only often seen a recent infection carried off in a few days by means of cleanliness, viz. bathing, fomentations, injections, &c. but have likewise found it of the greatest advantage in the more advanced stages of the disease. Of this I had lately a very remarkable instance in a man whose penis was almost wholly consumed by venereal ulcers; the matter had been allowed to continue on the sores, without any care having been taken to clean them, till, notwithstanding the use of mercury and other medicines, it had produced the effects above mentioned. I ordered warm milk and water to be injected three or four times a-day into all the sinous ulcers, in order to wash out the matter; after which they were stuffed with dry lint to absorb the fresh matter as it was generated. The patient at the same-time took every day half a grain of the corrosive sublimate of mercury, dissolved in an ounce of brandy, and drank an English quart of the decoction of sarsaparilla. By this treatment, in about six weeks, he was perfectly cured; and, what was very remarkable, a part of the penis was actually regenerated.

Doctor Gilchrist has given an account of a species of the *lues venerea* which prevails in the west of Scotland, to which the natives give the name of *Sibbins* or *Sivvins*. The Doctor observes, that the spreading of this disease is chiefly owing to a neglect of cleanliness, and seems to think, that by due attention to this *virtue*, it might be extirpated. The treatment of this disease is similar to that of a confirmed lues or pox. The *yaws*, a disease which is now very common both in America and the West India islands, may also be cured in the same manner.

goat-whey. This is a very proper plan, provided the infection has been totally eradicated beforehand: but when that is not the case, and the patient trusts to the whey for finishing his cure, he will often be disappointed. I have frequently known the disease return with all its virulence after a course of goat-whey, even when that course had been thought quite sufficient for completing the cure.

One of the most unfortunate circumstances attending patients in this disease, is the necessity they are often laid under of hurrying the cure. This induces them to take medicine too fast, and to leave it off too soon. A few grains more of medicine, or a few days longer confinement, would often be sufficient to perfect the cure; whereas, by neglect of these, a small degree of virulence is still left in the system, which gradually vitiates, and at length contaminates the whole mass. To avoid this, we would advise, that the patient should never leave off taking medicine immediately upon the disappearing of the symptoms, but continue it for some time after, gradually lessening the quantity, till there is sufficient ground to believe that the disease is entirely eradicated.

It is not only difficult, but absolutely impossible, to ascertain the exact degree of virulence that may attend the disease; for which reason it will always be a much safer rule to continue the use of medicine too long, than to leave it off too soon. This seems to be the leading maxim of a modern practitioner of some note for the venereal disease, who always orders his patient to perform a quarantine of at least forty days, during which time he takes forty bottles of, I suppose, a strong decoction of sarsaparilla, or some other anti-venereal simple. Whoever takes this method, and adds a sufficient quantity of corrosive sublimate, or some other active preparation of mercury to the decoction, will seldom fail to cure a confirmed lues.

It is peculiarly unfortunate for the cure of this disease, that not one in ten of those who contract it, are either able or willing to submit to a proper plan of regimen. The patient is willing to take medicine; but he must follow his business, and to prevent suspicions, must eat and drink like the rest of the family. This is the true source of nine-tenths of all the mischief arising from the venereal disease. I never knew the cure attended with any great difficulty or

danger where the patient strictly followed the physician's advice; but a volume would not be sufficient to point out the dreadful consequences which proceed from an opposite conduct. Schirrous testicles, ulcerous sore throats, madness, consumptions, carious bones, and a rotten progeny, are a few of the blessings derived from this source.

There is a species of false reasoning, with regard to this disease, which proves fatal to many. A person of a sound constitution contracts a slight degree of the disorder. He gets well without taking any great care, or using much medicine, and hence concludes that this will always be the case. The next time the disease occurs, though ten times more virulent, he pursues the same course, and his constitution is ruined. Indeed, the different degrees of virulence in the small-pox are not greater than in this disease, though, as the learned Sydenham observes, in some cases the most skilful physicians cannot cure, and in others the most ignorant old woman cannot kill, the patient in that disorder. Though a good constitution is always in favour of the patient, yet too great stress may be laid upon it. It does not appear from observation, that the most robust constitution is able to overcome the virulence of the venereal contagion, after it has got into the habit. In this case, a proper course of medicine is always indispensably necessary.

Although it is impossible, on account of the different degrees of virulence, &c. to lay down fixed and certain rules for the cure of this disease, yet the following general plan will always be found safe, and often successful, viz. to bleed and administer gentle purges with diuretics during the inflammatory state, and, as soon as the symptoms of inflammation are abated, to administer mercury, in any form that may be most agreeable to the patient. The same medicine, assisted by the decoction of sarsaparilla, and a proper regimen, will not only secure the constitution against the further progress of a confirmed pox, but will generally perform a complete cure.

Although the venereal disease may not be a proper subject of discussion for regular families and the nursery, yet there are many individuals to whom the observations here made may be of service in that complaint. There is no disease which opens so wide a field for the quack, none in which he so completely picks the pocket and ruins the con-

stitution of the ignorant and unwary. Mercury, though looked upon as a certain cure in every species of this disease, is only proper in one; and though every apothecary's boy pretends to cure the venereal disease by it, there is no medicine oftener misapplied. Though mercury is a certain cure for the *lues venerea*, it is a medicine of so very active a nature that it cannot be administered with too much care; it is the chief ingredient in all the nostrums daily advertised for the cure of this disease, and those who value their health or their life, should beware of allowing themselves to become, in a matter so serious, the dupes of imposture.

CHAP. XLVIII.

DISEASES OF WOMEN.

Women, in all civilized nations, have the management of domestic affairs, and it is very proper they should, as Nature has made them less fit for the more active and laborious employments. This indulgence, however, is generally carried too far; and females, instead of being benefited by it, are greatly injured, from the want of exercise and free air. To be satisfied of this, one need only compare the fresh and ruddy looks of a milk-maid, with the pale complexion of those females whose whole time is spent within doors. Though nature has made an evident distinction between the male and female, with regard to bodily strength and vigour, yet she certainly never meant, either that the one should be always without, or the other always within doors.

The confinement of females, besides hurting their figure and complexion, relaxes their solids, weakens their minds, and disorders all the functions of the body. Hence proceed obstructions, indigestion, flatulence, abortions, and the whole train of nervous disorders. These not only unfit women for being mothers and nurses, but often render them whimsical and ridiculous. A sound mind depends so much upon a healthy body, that where the latter is wanting, the former is rarely to be found.

I have always observed, that women who were chiefly employed without doors, in the different branches of hus-

bandry, gardening, and the like, were almost as hardy as their husbands, and that their children were likewise strong and healthy. But as the bad effects of confinement and inactivity upon both sexes have been already shewn, we shall proceed to point out those circumstances in the structure and design of females, which subject them to peculiar diseases; the chief of which are, their *monthly evacuations*, *pregnancy*, and *child bearing*. These, indeed, cannot properly be called diseases; but, from the delicacy of the sex, and their being often improperly managed in such situations, they become the source of numerous calamities.

OF THE MENSTRUAL DISCHARGE.

Females generally begin to menstruate about the age of fifteen, and leave it off about fifty, which renders these two periods the most critical of their lives. About the first appearance of this discharge, the constitution undergoes a very considerable change, generally indeed for the better, though sometimes for the worse. The greatest care is now necessary, as the future health and happiness of the female depends in a great measure upon her conduct at this period.*

If a girl about this time of life be confined to the house, kept constantly sitting, and neither allowed to romp about, nor employed in any active business, which gives exercise to the whole body, she becomes weak, relaxed, and puny; her blood not being duly prepared, she looks pale and wan; her health, spirits, and vigour decline, and she sinks into a valetudinarian for life. Such is the fate of numbers of those unhappy females, who, either from too much indulgence, or their own narrow circumstances, are, at this critical period, denied the benefit of exercise and free air.

A lazy indolent disposition proves likewise very hurtful to girls at this period. One seldom meets with complaints

* It is the duty of mothers, and those who are intrusted with the education of girls, to instruct them early in the conduct and management of themselves at this critical period of their lives. False modesty, inattention, and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and misfortunes in life, which a few sensible lessons from an experienced matron might have prevented. Nor is care less necessary in the subsequent return of this discharge. Taking improper food, violent affections of the mind, or catching cold at this period, is often sufficient to ruin the health, or to render the female ever after incapable of procreation.

from obstructions among the more active and industrious part of the sex; whereas the indolent and lazy are seldom free from them. These are in a manner eaten up by the *chlorosis*, or green-sickness, and other diseases of this nature. We would, therefore, recommend it to all who wish to escape these calamities, to avoid indolence and inactivity, as their greatest enemies, and to be as much abroad in the open air as possible.

Another thing which proves very hurtful to girls about this period of life, is unwholesome food. Fond of all manner of trash, they often indulge in it, till their whole humours are quite vitiated. Hence ensue indigestions, want of appetite, and a numerous train of evils. If the fluids be not duly prepared, it is utterly impossible that the secretions should go properly on. Accordingly we find, that such girls as lead an indolent life, and eat great quantities of trash, are not only subject to obstructions of the *menses*, but likewise to glandular obstructions; as the scrophula, or king's evil, &c.

A dull disposition is also very hurtful to girls at this period. It is a rare thing to see a sprightly girl who does not enjoy good health, while the grave, moping melancholy creature proves the very prey of vapours and hysterics. Youth is the season for mirth and cheerfulness; let it therefore be indulged; it is an absolute duty. To lay in a stock of health in time of youth, is as necessary a piece of prudence, as to make provision against the decays of old age. While, therefore, wise Nature prompts the happy youth to join in sprightly amusements, let not the severe dictates of hoary age forbid the useful impulse, nor damp with serious gloom the season destined to mirth and innocent festivity.

Another thing very hurtful to females about this period of life, is strait clothes. They are fond of a fine shape, and foolishly imagine that this can be acquired by lacing themselves tight. Hence, by squeezing the stomach and bowels, they hurt the digestion, and occasion many incurable maladies. This error is not indeed so common as it has been, but, as fashions change, it may come about again; we therefore think it not improper to mention it. I know many females who, to this day, feel the dreadful effects of that wretched custom which prevailed some years ago, of squeezing every girl into as small a size in the middle as possible.

Human invention could not possibly have devised a practice more destructive to health.

After a female has arrived at that period of life when the *menses* usually begin to flow, and they do not appear, but, on the contrary, her health and spirits begin to decline, we would advise, instead of shutting the poor girl up in the house, and dosing her with steel, asafœtida, and other nauseous drugs, to place her in a situation where she can enjoy the benefit of free air and agreeable company. There let her eat wholesome food, take sufficient exercise, and amuse herself in the most agreeable manner; and we have little reason to fear but Nature, thus assisted, will do her proper work. Indeed she seldom fails, unless where the fault is on our side.

This discharge in the beginning is seldom so instantaneous as to surprise females unawares. It is generally preceded by symptoms which foretel its approach; as a sense of heat, weight, and dull pain in the loins; distension and hardness of the breasts; headache; loss of appetite; lassitude; paleness of the countenance; and sometimes a slight degree of fever. When these symptoms appear about the age at which the menstrual flux usually begins, every thing should be carefully avoided which may obstruct that necessary and salutary evacuation; and all means used to promote it; as sitting frequently over the steams of warm water, drinking warm diluting liquors, &c.

After the *menses* have once begun to flow, the greatest care should be taken to avoid every thing that may tend to obstruct them. Females ought to be exceedingly cautious of what they eat or drink at the time they are out of order. Every thing that is cold, or apt to sour on the stomach, ought to be avoided; as fruit, butter-milk, and such like. Fish, and all kinds of food that are hard of digestion, are also to be avoided. As it is impossible to mention every thing that may disagree with individuals at this time, we would recommend it to every female to be very attentive to what disagrees with herself, and carefully to avoid it.

Cold is extremely hurtful at this particular period. More of the sex date their diseases from colds caught while they are out of order, than from all other causes. This ought surely to put them upon their guard, and to make them very circumspect in their conduct at such times. A degree of

cold that will not in the least hurt them at another time, will at this period be sufficient entirely to ruin their health and constitution.

The greatest attention ought likewise to be paid to the mind, which should be kept as easy and cheerful as possible. Every part of the animal economy is influenced by the passions, but none more so than this. Anger, fear, grief, and other affections of the mind, often occasion obstructions of the menstrual flux, which prove absolutely incurable.

From whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be used to restore it. For this purpose we would recommend sufficient exercise, in a dry, open, and rather cool air; wholesome diet, and if the body be weak and languid, generous liquors; also cheerful company, and all manner of amusements. If these fail, recourse must be had to medicine.

When obstructions proceed from a weak relaxed state of the solids, such medicines as tend to promote digestion, to brace the solids, and assist the body in preparing good blood, ought to be used. For this purpose, I have of late made use of pills composed of prepared steel, powdered myrrh, and the best aloes, equal parts. These must be formed into pills of the common size, and two or three of them given, every night at bed-time. The principal medicines, however, are iron, and the Peruvian bark, with other bitters and astringents. Filings of iron may be infused in wine or ale, two or three ounces to an English quart, and after it has stood for two or three weeks, it may be filtered, and about half a wine-glass of it taken twice a-day: or prepared steel may be taken in the dose of half a dram, mixed with a little honey or treacle, three or four times a-day. The bark and other bitters may either be taken in substance or infusion, as is most agreeable to the patient.

When obstructions proceed from a viscid state of the blood, or for women of a gross or full habit, evacuations, and such medicines as attenuate the humours, are necessary. The patient in this case ought to be bled, to bathe her feet frequently in warm water, to take now and then a cooling purge, and to live upon a spare thin diet. Her diet should be whey, water, or small beer, and she ought to take sufficient exercise. A tea-spoonful of the tincture of black hellebore may also be taken twice a-day in a cup of warm water.

When obstructions proceed from affections of the mind, as grief, fear, anger, &c. every method should be taken to amuse and divert the patient. And that she may the more readily forget the cause of her affliction, she ought, if possible, to be removed from the place where it happened. A change of place, by presenting the mind with a variety of new objects, has often a very happy influence in relieving it from the deepest distress. A soothing, kind, and affable behaviour to females in this situation, is also of the last importance.

An obstruction of the *menses* is often the effect of other maladies. When this is the case, instead of giving medicines to force that discharge, which might be dangerous, we ought by all means to endeavour to restore the patient's health and strength. When that is effected, the other will return of course.

But the menstrual flux may be too great as well as too small. When this happens, the patient becomes weak, the colour pale, the appetite and digestion are bad, to which œdematous swellings of the feet, dropsies, and consumptions, often ensue. This frequently happens to women about the age of forty-five or fifty, and is very difficult to cure. It may proceed from a sedentary life; a full diet, consisting chiefly of salted, high-seasoned, or acrid food; the use of spirituous liquors; excessive fatigue; relaxation; a dissolved state of the blood; violent passions of the mind, &c.

The treatment of this disease must be varied according to its cause. When it is occasioned by any error in the patient's regimen, an opposite course to that which induced the disorder must be pursued, and such medicines taken as have a tendency to restrain the flux, and counteract the morbid affections of the system whence it proceeds.

To restrain the flux, the patient should be kept quiet and easy both in body and mind. If it be very violent, she ought to lie in bed with her head low; to live upon a cool and slender diet, as veal or chicken broths with bread; and to drink decoctions of nettle-roots, or the greater comfrey. If these be not sufficient to stop the flux, stronger astringents may be used, as Japan earth, alum, elixir of vitriol, the Peruvian bark, &c.*

* Two drams of alum and one of Japan earth may be pounded together,

The *uterine flux* may offend in quality as well as in quantity. What is usually called the *fluor albus*, or whites, is a very common disease, and proves extremely hurtful to delicate women. This discharge, however, is not always white, but sometimes pale, yellow, green, or of a blackish colour; sometimes it is sharp and corrosive, sometimes foul and fœtid, &c. It is attended with a pale complexion, pain in the back, loss of appetite, swelling of the feet, and other signs of debility. It generally proceeds from a relaxed state of the body, arising from indolence, the excessive use of tea, coffee, or other weak and watery diet.

To remove this disease, the patient must take as much exercise as she can bear without fatigue. Her food should be solid and nourishing, but of easy digestion; and her drink rather generous, as red port or claret, mixed with Pyrmont, Bristol, or lime-water. Tea and coffee are to be avoided. I have often known strong broths have an exceeding good effect, and sometimes a milk diet alone will perform a cure. The patient ought not to lie too long in bed. When medicine is necessary, we know none preferable to the Peruvian bark, which in this case ought always to be taken in substance. In warm weather, the cold-bath will be of considerable service.

That period of life at which the *menses* cease to flow, is likewise very critical to the sex. The stoppage of any customary evacuation, however small, is sufficient to disorder the whole frame, and often to destroy life itself. Hence it comes to pass, that so many women either fall into chronic disorders, or die about this time. Such of them, however, as survive without contracting any chronic disease, often become more healthy and hardy than they were before, and enjoy strength and vigour to a very great age.

If the *menses* cease all of a sudden in women of a full habit, they ought to abate somewhat of their usual quantity of food, especially of the more nourishing kind, as flesh, eggs, &c. They ought likewise to take sufficient exercise,

and divided into eight or nine doses, one of which may be taken three times a-day.

Persons whose stomachs cannot bear the alum, may take two tablespoonfuls of the tincture of roses three or four times a-day, to each dose of which ten drops of laudanum may be added.

If these should fail, half a dram of the Peruvian bark, in powder, with ten drops of the elixir of vitriol, may be taken in a glass of red wine, four times a-day.

and to keep the body open. This may be done by taking once or twice a-week, a little rhubarb, or an infusion of hiera picra in wine or brandy.

It often happens that women of a gross habit, at this period of life, have ulcerous sores break out about their ancles, or in other parts of the body. Such ulcers ought to be considered as critical, and should either be suffered to continue open, or have artificial drains substituted in their stead. Women who will have such sores dried up, are often soon after carried off by acute diseases, or fall into those of a chronic nature.

OF PREGNANCY.

Though pregnancy is not a disease, yet that state is often attended with a variety of complaints which merit attention, and which sometimes require the assistance of medicine. Some women, indeed, are more healthy during their pregnancy than at any other time; but this is by no means the general case; most of them *breed in sorrow*, and are frequently indisposed during the whole time of pregnancy. Few fatal diseases, however, happen during that period; and hardly any, except abortion, that can be called dangerous.

Pregnant women are often afflicted with the heart-burn. The method of treating this complaint has been already pointed out. They are likewise, in the more early periods of pregnancy, often harassed with sickness and vomiting, especially in the morning. The method of relieving these complaints has also been shewn. Both the head-ache and tooth-ache are very troublesome symptoms of pregnancy. The former may generally be removed by keeping the body gently open, by the use of prunes, figs, roasted apples, and such like. When the pain is very violent, bleeding may be necessary. For the treatment of the latter we must refer to that article. Several other complaints incident to pregnant women might be mentioned, as a cough and difficulty of breathing, suppression and incontinency of urine, &c.; but as all of these have been taken notice of before, it is needless to repeat them.

Every pregnant woman is more or less in danger of abortion. This should be guarded against with the greatest care, as it not only weakens the constitution, but renders the

woman liable to the same misfortune afterwards.* Abortion may happen at any period of pregnancy, but it is most common in the second or third month. Sometimes, however, it happens in the fourth or fifth. If it happens within the first month, it is usually called a false conception; if after the seventh month, the child may often be kept alive by proper care.

The common causes of abortion are, the death of the child; weakness or relaxation of the mother; great evacuations; violent exercise; raising great weights; reaching too high; jumping or stepping from an eminence; vomiting; coughing; convulsion-fits; blows on the belly; falls; fevers; disagreeable smells; excess of blood; indolence; high-living, or the contrary; violent passions or affections of the mind, as fear, grief, &c.

The signs of approaching abortion are, pain in the loins, or about the bottom of the belly; a dull heavy pain in the inside of the thighs; a slight degree of coldness, or shivering; sickness, palpitation of the heart; the breasts become flat and soft; the belly falls; and there is a discharge of blood or watery humours from the womb.

To prevent abortion, we would advise women of a weak or relaxed habit to use solid food, avoiding great quantities of tea, and other weak and watery liquors; to rise early and go soon to bed; to shun damp houses; to take frequent exercise in the open air, but to avoid fatigue; and never to go abroad in damp foggy weather, if they can help it.

Women of a full habit ought to use a spare diet, avoiding strong liquors, and every thing that may tend to heat the body, or increase the quantity of blood. Their diet should be of an opening nature, consisting principally of vegetable substances. Every woman with child ought to be kept cheerful and easy in her mind. Her appetites, even though depraved, ought to be indulged as far as prudence will permit.

When any signs of abortion appear, the woman ought to

* Every mother who procures an abortion does it at the hazard of her life; yet there are not a few who run this risk merely to prevent the trouble of bearing and bringing up children. It is surely a most unnatural crime, and cannot, even in the most abandoned, be viewed without horror; but in the decent matron, it is still more unpardonable.—Those wretches who daily advertise their assistance to women in this business, deserve, in my opinion, the most severe of all human punishments.

be laid in bed on a mattress, with her head low. She should be kept quiet, and her mind soothed and comforted. She ought not to be kept too hot, nor to take any thing of a heating nature. Her food should consist of broths, rice and milk, jellies, gruels made of oatmeal, and the like, all of which ought to be taken cold.

If she be able to bear it, she should lose at least half a pound of blood from the arm. Her drink ought to be barley-water sharpened with juice of lemon; or she may take half a dram of powdered nitre, in a cup of water-gruel, every five or six hours. If the woman be seized with a violent looseness, she ought to drink the decoction of calcined hartshorn prepared. If she be affected with vomiting, let her take frequently two table spoonfuls of the saline mixture. In general, opiates are of service; but they should always be given with caution.

Sanguine robust women, who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives. By this means, and observing the regimen above prescribed, they might often escape that misfortune.

Though we recommend due care for preventing abortion, we would not be understood as restraining pregnant women from their usual exercises. This would generally operate the quite contrary way. Want of exercise not only relaxes the body, but induces a plethora, or too great a fulness of the vessels, which are the two principal causes of abortion. There are, however, some women of so delicate a texture, that it is necessary for them to avoid almost every kind of exercise during the whole period of pregnancy.

OF CHILD-BIRTH.

Many diseases proceed from the want of due care in child-bed; and the more hardy part of the sex are most apt to despise the necessary precautions in this state. This is peculiarly the case with young wives. They think, when the labour pains are ended, the danger is over; but in truth it may only then be said to be begun. Nature, if left to herself, will seldom fail to expel the *fœtus;* but proper care and management are certainly necessary for the recovery of the mother. No doubt, mischief may be

done by too much as well as by too little care. Hence females who have the greatest number of attendants in child-bed, generally recover worst. But this is not peculiar to the state of child-bed. Excessive care always defeats its own intention, and is generally more dangerous than none at all.*

During actual labour, nothing of a heating nature ought to be given. The woman may now and then take a little panado, and her drink ought to be toast and water, or thin groat-gruel. Spirits, wines, cordial-waters, and other things which are given with a view to strengthen the mother, and promote the birth, for the most part tend only to increase the fever, inflame the womb, and retard the labour. Besides, they endanger the woman afterwards, as they often occasion violent and mortal hæmorrhages, or dispose her to eruptive and other fevers.

When the labour proves tedious and difficult, to prevent inflammations, it will be proper to bleed. An emollient clyster ought likewise frequently to be administered, and the patient should sit over the steams of warm water. The passage ought to be gently rubbed with a little soft pomatum, or fresh butter, and cloths wrung out of warm water applied over the belly. If nature seems to sink, and the woman is greatly exhausted with fatigue, a draught of generous wine, or some other cordial, may be given, but not otherwise. These directions are sufficient in natural labours; and in all preternatural cases, a skilful surgeon, or man-midwife, ought to be called as soon as possible.

After delivery, the woman ought to be kept as quiet and

* Though the management of women in child-bed has been practised as an employment since the earliest accounts of time, yet it is still in most countries on a very bad footing. Few women think of following this employment till they are reduced to the necessity of doing it for bread. Hence not one in a hundred of them have any education, or proper knowledge of their business. It is true, that Nature, if left to herself, will generally expel the *fœtus;* but it is equally true, that most women in child-bed require to be managed with skill and attention, and that they are often hurt by the superstitious prejudices of ignorant and officious midwives. The mischief done in this way is much greater than is generally imagined; most of which might be prevented by allowing no women to practise midwifery but such as are properly qualified. Were due attention paid to this, it would not only be the means of saving many lives, but would prevent the necessity of employing men in this indelicate and disagreeable branch of medicine, which is, on many accounts, more proper for the other sex.

easy as possible.* Her food should be light and thin, as gruel, panado, &c. and her drink weak and diluting. To this rule, however, there are many exceptions. I have known several women, whose spirits could not be supported in child-bed without solid food and generous liquors; to such, a glass of wine and a bit of chicken must be allowed.

Sometimes an excessive hæmorrhage or flooding happens after delivery. In this case the patient should be laid with her head low, be kept cool, and be in all respects treated as for an excessive flux of the menses. If the flooding proves violent, linen cloths which have been wrung out of a mixture of equal parts of vinegar and water, or red wine, should be applied to the belly, the loins, and the thighs; these must be changed as they grow dry; and may be discontinued as soon as the flooding abates.†

If there be violent pains after delivery, the patient ought to drink plentifully of warm diluting liquors, as groat-gruel, or tea with a little saffron in it; and to take small broths, with caraway-seeds, or a bit of orange-peel in them; an ounce of the oil of sweet almonds may likewise be frequently taken in a cup of any of the above liquors; and if the patient be restless, a spoonful of the syrup of poppies may now and then be mixed with a cup of her drink. If she be hot or feverish, one of the following powders may be taken in a cup of her usual drink every five or six hours.‡

An inflammation of the womb is a dangerous and not unfrequent disease after delivery. It is known by pains in the lower part of the belly, which are greatly increased upon touching; by the tension or tightness of the parts;

* We cannot help taking notice of that ridiculous custom which still prevails in some parts of the country, of collecting a number of women together upon such occasions. These, instead of being useful, serve only to crowd the house, and obstruct the necessary attendants. Besides, they hurt the patient with their noise; and often, by their untimely and impertinent advice, do much mischief.

† In a violent flooding after delivery, I have seen very good effects from the following mixture: Take of penny-royal water, simple cinnamon-water, and syrup of poppies, each two ounces, elixir of vitriol a dram. Mix, and take two table spoonfuls every two hours, or oftener if necessary.

‡ Take of crab's claws prepared half an ounce, purified nitre two drams, saffron powdered half a dram; rub them together in a mortar, and divide the whole into eight or nine doses.

When the patient is low-spirited, or troubled with hysterical complaints, she ought to take frequently twelve or fifteen drops of the tincture of asafœtida in a cup of penny-royal tea.

great weakness; change of countenance; a constant fever, with a weak and hard pulse; a slight delirium, or raving; sometimes incessant vomiting; a hiccup; a discharge of reddish, stinking, sharp water from the womb; an inclination to go frequently to stool; a heat, and sometimes total suppression of urine.

This must be treated like other inflammatory disorders, by bleeding and plentiful dilution. The drink may be thin gruel or barley-water; in a cup of which half a dram of nitre may be dissolved, and taken three or four times a-day. Clysters of warm milk and water must be frequently administered; and the belly should be fomented by cloths wrung out of warm water, or by applying bladders filled with warm milk and water to it.

A suppression of the *lochia* or usual discharges after delivery, and the milk-fever, must be treated nearly in the same manner as an inflammation of the womb. In all these cases, the safest course is plentiful dilution, gentle evacuations, and fomentations of the parts affected. In the milk-fever, the breasts may be embrocated with a little warm linseed-oil, or the leaves of red cabbage may be applied to them. The child should be often put to the breast, or it should be drawn by some other person.

Nothing would tend more to prevent the milk-fever than putting the child early to the breast. The custom of not allowing children to suck for the first two or three days, is contrary to nature and common sense, and is very hurtful both to the mother and child.

Every mother who has milk in her breasts, ought either to suckle her own child, or to have her breasts frequently drawn, at least for the first month. This would prevent many of the diseases which prove fatal to women in childbed.

When an inflammation happens in the breast, attended with redness, hardness, and other symptoms of suppuration, the safest application is a poultice of bread and milk, softened with oil or fresh butter. This may be renewed twice a-day, till the tumour be either discussed or brought to suppuration. The use of repellents, in this case, is very dangerous; they often occasion fevers, and sometimes cancers; whereas a suppuration is seldom attended with any danger, and has often the most salutary effects.

When the nipples are fretted or chapped, they may be anointed with a mixture of oil and bees-wax, or a little powdered gum-arabic may be sprinkled on them. I have seen Hungary water applied to the nipples, have a very good effect. Should the complaint prove obstinate, a cooling purge may be given, which generally removes it.

The miliary fever is a disease incident to women in child-bed; but as it has been treated of already, we shall take no farther notice of it. The celebrated Hoffman observes, That this fever of child-bed women might generally be prevented, if they during their pregnancy were regular in their diet, used moderate exercise, took now and them a gentle laxative of manna, rhubarb, or cream of tartar; not forgetting to bleed in the first months, and avoid all sharp air. When the labour is coming on, it is not to be hastened with forcing medicines, which inflame the blood and humours, or put them into unnatural commotions. Care should be taken, after the birth, that the natural excretions proceed regularly; and if the pulse be quick, a little nitrous powder, or some other cooling medicine, should be administered.

The most fatal disorder consequent upon delivery is the *puerperal*, or child-bed fever. It generally makes its attack upon the second or third day after delivery. Sometimes indeed it comes on sooner, and at other times, though rarely, it does not appear before the fifth or sixth day.

It begins, like most other fevers, with a cold or shivering fit, which is succeeded by restlessness, pain of the head, great sickness at the stomach, and bilious vomiting. The pulse is generally quick, the tongue dry, and there is a remarkable depression of spirits and loss of strength. A great pain is usually felt in the back, hips, and region of the womb; a sudden change in the quantity or quality of the *lochia* also takes place; and the patient is frequently troubled with a *tenesmus*, or constant inclination to go to stool. The urine, which is very high coloured, is discharged in small quantity, and generally with pain. The belly sometimes swells to a considerable bulk, and becomes susceptible of pain from the slightest touch. When the fever has continued for a few days, the symptoms of inflammation usually subside, and the disease acquires a more putrid form. At this period, if not sooner, a bilious or putrid looseness,

of an obstinate and dangerous nature, comes on, and accompanies the disease through all its future progress.

There is not any disease that requires to be treated with more skill and attention than this; consequently the best assistance ought always to be obtained as soon as possible. In women of plethoric constitutions, bleeding will generally be proper at the beginning; it ought, however, to be used with caution, and not to be repeated, unless where the signs of inflammation rise high; in which case it will also be necessary to apply a blistering-plaster to the region of the womb.

During the rigour, or cold fit, proper means should be used to abate its violence and shorten its duration. For this purpose, the patient may drink freely of warm diluting liquors, and, if low, may take now and then a cup of wine-whey; warm applications to the extremities, as heated bricks, bottles or bladders filled with warm water, and such like, may also be used with advantage.

Emollient clysters of milk and water, or of chicken water, ought to be frequently administered through the course of the disease. These prove beneficial, by promoting a discharge from the intestines, and also by acting as a kindly fomentation to the womb and parts adjacent. Great care, however, is requisite in giving them, on account of the tenderness of the parts in the *pelvis* at this time.

To evacuate the offending bile from the stomach, a vomit is generally given. But as this is apt to increase the irritability of the stomach, already too great, it will be safer to omit it, and to give in its stead a gentle laxative, which will both tend to cool the body, and to procure a free discharge of the bile.*

The medicine which I have always found to succeed best in this disease, is the saline draught. This, if frequently repeated, will often put a stop to the vomiting, and at the same time lessen the violence of the fever. If it runs off by stool, or if the patient be restless, a few drops of laudanum, or some syrup of poppies, may occasionally be added.

If the stools should prove so frequent, as to weaken and

* Midwives ought to be very cautious in administering vomits or purges to women in child-bed. I have known a woman who was recovering extremely well, thrown into the most imminent danger, by a strong purge which was given her by an officious midwife.

exhaust the patient, a starch clyster, with thirty or forty drops of laudanum in it, may be administered as occasion shall require; and the drink may be rice-water, in every English pint of which half an ounce of gum-arabic has been dissolved. Should these fail, recourse must be had to Columbo-root, or the powder of bole combined with opium.

Though in general the food ought to be light, and the drink diluting, yet when the disease has been long protracted, and the patient is greatly spent by evacuations, it will be necessary to support her with nourishing diet, and generous cordials.

It was observed, that this fever, after continuing for some time, often acquires a putrid form. In this case the Peruvian bark must be given, either by itself, or joined with cordials, as circumstances may require. As the bark in substance will be apt to purge, it may be given in decoction or infusion mixed with the tincture of roses, or other gentle astringents; or a scruple of the extract of bark with half an ounce of spirituous cinnamon-water, two ounces of common water, and ten drops of laudanum, may be made into a draught, and given every second, third, or fourth hour, as shall be found necessary.

When the stomach will not bear any kind of nourishment, the patient may be supported for some time by clysters of beef-tea or chicken-broth.

To avoid this fever, every woman in child-bed ought to be kept perfectly easy; her food should be light and simple, and her bed-chamber cool and properly ventilated. There is not any thing more hurtful to a woman in this situation than being kept too warm. She ought not to have her body bound too tight, nor to rise too soon from bed, after delivery; catching cold is also to be avoided; and a proper attention should be paid to cleanliness.

To prevent the milk-fever, the breasts ought to be frequently drawn; and if they are filled previous to the onset of a fever, they should, upon its first appearance, be drawn, to prevent the milk from becoming acrid, and its being absorbed in this state. Costiveness is likewise to be avoided. This will be best effected by the use of mild clysters and a laxative diet.

We shall conclude our observations on child-bed women, by recommending it to them, above all things, to beware of

cold. Poor women, whose circumstances oblige them to quit their bed too soon, often contract diseases from cold, of which they never recover. It is a pity the poor are not better taken care of in this situation.

But the better sort of women run the greatest hazard from too much heat. They are generally kept in a sort of bagnio for the first eight or ten days, and then dressed out to see company. The danger of this conduct must be obvious to every one.

The superstitious custom of obliging women to keep the house till they go to church, is likewise a very common cause of catching cold. All churches are damp, and most of them cold; consequently they are the very worst places to which a woman can go to make her first visit, after having been confined in a warm room for a month.

OF BARRENNESS.

Barrenness may be very properly reckoned among the diseases of females, as few married women, who have not children, enjoy a good state of health. It may proceed from various causes, as high living, grief, relaxation, &c.; but it is chiefly owing to an obstruction or irregularity of the menstrual flux.

It is very certain that high living vitiates the humours, and prevents fecundity. We seldom find a barren woman among the labouring poor, while nothing is more common among the rich and affluent. The inhabitants of every country are prolific in proportion to their poverty; and it would be an easy matter to adduce many instances of women, who, by being reduced to live entirely upon milk and vegetable diet, have conceived and brought forth children, though they never had any before. Would the rich use the same sort of food and exercise as the better sort of peasants, they would seldom have cause to envy their poor vassals and dependants the blessing of a numerous and healthy offspring, while they pine in sorrow for want of even a single heir to their extensive domains.

Affluence begets indolence, which not only vitiates the humours, but induces a general relaxation of the solids; a state highly unfavourable to procreation. To remove this, we would recommend the following course: First, sufficient

exercise in the open air; secondly, a diet consisting chiefly of milk and vegetables;* thirdly, the use of astringent medicines, as steel, alum, dragon's blood, elixir of vitriol, the Spa or Tunbridge waters, Peruvian bark, &c.; and, lastly, above all, the cold-bath.

Barrenness is often the consequence of grief, sudden fear, anxiety, or any of the passions which tend to obstruct the menstrual flux. When barrenness is suspected to proceed from affections of the mind, the person ought to be kept as easy and cheerful as possible; all disagreeable objects are to be avoided, and every method taken to amuse and entertain the fancy.

CHAP. XLIX.

DISEASES OF CHILDREN.

MISERABLE indeed is the lot of man in the state of infancy! he comes into the world more helpless than any other animal, and stands much longer in need of the protection and care of his parents: but alas! this care is not always bestowed upon him; and when it is, he often suffers as much from improper management as he would have done from neglect. Hence the officious care of parents, nurses, and midwives, becomes one of the most fruitful sources of the disorders of infants.†

* Dr Cheyne avers, that want of children is oftener the fault of the male than of the female (in this the Doctor and I do not agree,) and strongly recommends a milk and vegetable diet to the former as well as the latter; adding, that his friend Dr Taylor, whom he calls the Milk Doctor of Croydon, had brought sundry opulent families, in his neighbourhood, who had continued some years after marriage without progeny, to have several fine children, by keeping both parents, for a considerable time, to a milk and vegetable diet.

† Of the officious and ill-judged care of midwives, we shall adduce only one instance, viz. the common practice of torturing infants, by squeezing their breasts, to draw off the milk, as they call it. Though a small quantity of moisture is generally found in the breasts of infants, yet, as they are certainly not intended to give suck, this ought never to be drawn off. I have seen this cruel operation bring on hardness, inflammation, and suppuration of the breasts; but never knew any ill consequences from its being omitted. When the breasts are hard, the only application that we would recommend is a soft poultice, or a little of the diachylon plaster, spread thin upon a bit of soft leather, about the size of half-a-crown, and applied over each nipple. These may be suffered to continue till the hardness disappears.

It must be obvious to every attentive person, that the first diseases of infants arise chiefly from their bowels. Nor is this in the least to be wondered at, as they are in a manner poisoned with indigestible drugs and improper diet as soon as they come into the world. Every thing that the stomach cannot digest may be considered as a poison; and unless it can be thrown up, or voided by stool, it must occasion sickness, gripes, spasmodic affections of the bowels, or what the good women call inward fits, and at last convulsions and death.

As these symptoms evidently arise from somewhat that irritates the intestines, doubtless the proper method of cure must be to expel it as soon as possible. The most safe and effectual method of doing this is by gentle vomits. Five or six grains of the powder of ipecacuanha may be mixed in two table-spoonfuls of water, and sweetened with a little sugar. A tea-spoonful of this may be given to the infant every quarter of an hour till it operates: or, what will more certainly answer the purpose, a grain of emetic tartar may be dissolved in three ounces of water, sweetened with a little syrup, and given as above. Those who are willing to use the emetic tartar, may give six or seven drops of the antimonial wine, in a tea-spoonful of water or thin gruel. Small doses of the ipecacuanha wine will be more gentle than any of the above, and ought to be preferred.

These medicines will not only cleanse the stomach, but will generally likewise open the body. Should this, however, not happen, and if the child be costive, some gentle purge will be necessary; for this purpose, some manna and pulp of cassia may be dissolved in boiling water, and given in small quantities till it operates; or, what will answer rather better, a few grains of *magnesia alba* may be mixed in any kind of food that is given to the child, and continued till it has the desired effect. If these medicines be properly administered, and the child's belly and limbs frequently rubbed with a warm hand before the fire, they will seldom fail to relieve those affections of the stomach and bowels from which infants suffer so much.

These general directions include most of what can be done for relieving the internal disorders of infants. They will likewise go a considerable way in alleviating those which appear externally, as the rash, *gum*, or *fellon*, &c.

These, as was formerly observed, are principally owing to too hot a regimen, and consequently will be most effectually relieved by gentle evacuations. Indeed, evacuations of one kind or other constitute a principal part of the medicine of infants, and will seldom, if administered with prudence, in any of their diseases, fail to give relief.

OF THE MECONIUM.

The stomach and bowels of a new-born infant are filled with a blackish-coloured matter of the consistence of syrup, commonly called the *meconium.* This is generally passed soon after the birth, by the mere effort of Nature ; in which case it is not necessary to give the infant any kind of medicine. But if it should be retained, or not sufficiently carried off, a little manna, or *magnesia alba*, may be given, as mentioned above ; or if these should not be at hand, a common spoonful of whey, sweetened with a little honey, or moist sugar, will answer the purpose.

The most proper medicine for expelling the *meconium* is the mother's milk, which is always at first of a purgative quality. Were children allowed to suck as soon as they shew an inclination for the breast, they would seldom have occasion for medicines to discharge the *meconium ;* but even where this is not allowed, they ought never to have daubs of syrup, oils, and other indigestible stuff, crammed down their throats.

THE APHTHÆ, OR THRUSH.

The aphthæ are little whitish ulcers affecting the whole inside of the mouth, tongue, throat, and stomach of infants. Sometimes they reach through the whole intestinal canal ; in which case they are very dangerous, and often put an end to the infant's life.

If the aphthæ are of a pale colour, pellucid, few in number, soft, superficial, and fall easily off, they are not dangerous ; but if opaque, yellow, brown, black, thick, or running together, they ought to be dreaded.

It is generally thought that the aphthæ owe their origin to acid humours ; we have reason, however, to believe they are more frequently owing to too hot a regimen both of mo-

ther and child. It is a rare thing to find a child who is not dosed with wine, punch, cinnamon-waters, or some other hot and inflaming liquors, almost as soon as it is born. It is well known that these will occasion inflammatory disorders even in adults; is it any wonder, then, that they should heat and inflame the tender bodies of infants, and set, as it were, the whole constitution on a blaze?

The most proper medicines for the aphthæ are vomits, such as have been already recommended, and gentle laxatives. Five grains of rhubarb, and half a dram of *magnesia alba*, may be rubbed together, and divided into six doses, one of which may be given to the infant every four or five hours till they operate. These powders may either be given in the child's food, or a little of the syrup of pale roses, and may be repeated as often as is found necessary to keep the body open. It is common in this case to administer calomel; but as that medicine sometimes occasions gripes, it ought always to be given to infants with caution.

Many things have been recommended for gargling the mouth and throat in this disease; but it is not easy to apply these in very young children; we would therefore recommend it to the nurse to rub the child's mouth frequently with a little borax and honey; or with the following mixture: Take fine honey an ounce, borax a dram, burnt alum half a dram, rose-water two drams: mix them together. A very proper application in this case, is a solution of ten or twelve grains of white vitriol in eight ounces of barley-water. These may be applied with the finger, or by means of a bit of soft rag tied to the end of a probe.

OF ACIDITIES.

The food of children being for the most part of an acescent nature, it readily turns sour upon the stomach, especially if the body be any way disordered. Hence most diseases of children are accompanied with evident signs of acidity, as green stools, gripes, &c. These appearances have induced many to believe, that all the diseases of children were owing to an acid abounding in the stomach and bowels; but whoever considers the matter attentively, will find that these symptoms of acidity are oftener the effect than the cause of their diseases.

Nature evidently intended that the food of children should be acescent; and unless the body be disordered, or the digestion hurt, from some other cause, we will venture to say, that the acescent quality of their food is seldom injurious to them. Acidity, however, is often a symptom of disorders in children; and, as it is sometimes a troublesome one, we shall point out the method of relieving it.

When green stools, gripes, purgings, sour smells, &c. shew that the bowels abound with an acid, the child should have a little small broth, with light white bread in it; and should have sufficient exercise, in order to promote the digestion. It has been customary in this case to give the pearl-julep, chalk, crabs'-eyes, and other testaceous powders. These, indeed, by their absorbent quality, may correct the acidity; but they are attended with this inconvenience, that they are apt to lodge in the bowels, and occasion costiveness, which may prove very hurtful to the infant. For this reason they should never be given unless mixed with purgative medicines; as rhubarb, manna, or such like.

The best medicine which we know in all cases of acidity, is that fine insipid powder, called *magnesia alba*. It purges, and at the same time corrects the acidity; by which means it not only removes the disease, but carries off its cause. It may be given in any kind of food.

When an infant is troubled with gripes, it ought not at first to be dosed with brandy, spiceries, and other hot things; but should have its body opened with an emollient clyster, or the medicine mentioned above; and, at the same time, a little brandy may be rubbed on its belly with a warm hand before the fire. I have seldom seen this fail to ease the gripes of infants. If it should happen, however, not to succeed, a little brandy or other spirits may be mixed with thrice the quantity of warm water, and a tea-spoonful of it given frequently, till the infant be easier. Sometimes a little peppermint-water will answer this purpose as well.

GALLING AND EXCORIATION.

These are very troublesome to children. They happen chiefly about the groin and wrinkles of the neck, under the arms, behind the ears, and in other parts that are moistened by the sweat or urine.

As these complaints are, in a great measure, owing to want of cleanliness, the most effectual means of preventing them are, to wash the parts frequently with cold water, to change the linen often, and, in a word, to keep the child in all respects thoroughly clean. When this is not sufficient, the excoriated parts may be sprinkled with absorbent or drying powders; as burnt hartshorn, tutty, chalk, crabs'-claws prepared, and the like. When the parts affected are very sore, and tend to a real ulceration, it will be proper to add a little sugar of lead to the powders; or to anoint the place with the camphorated ointment. If the parts be washed with spring-water, in which a little white vitriol has been dissolved, it will dry and heal them very powerfully. One of the best applications for this purpose is to dissolve some fuller's-earth in a sufficient quantity of hot water; and after it has stood till it is cold, to rub it gently upon the galled parts once or twice a-day; or to wash them gently now and then with a mixture of equal parts of rose-water and spirits of wine.

STOPPAGE OF THE NOSE.

The nostrils of infants are often plugged up with a gross *mucus*, which prevents their breathing freely, and likewise renders it difficult for them to suck or swallow.

Some in this case order, after a suitable purge, two or three grains of white vitriol dissolved in half an ounce of marjoram water, and filtered, to be applied now and then to the nostrils with a linen rag. Wedellus says, if two grains of white vitriol, and the same quantity of *elaterium*, be dissolved in half an ounce of marjoram-water, and applied to the nose, as above directed, that it brings away the *mucus* without sneezing.

In obstinate cases these medicines may be tried; but I have never found any thing necessary, besides rubbing the nose at bed-time with a little sweet oil, or fresh butter. This resolves the filth, and renders the breathing more free.*

* Some nurses remove this complaint by sucking the child's nose. This is by no means a cleanly operation: but when nurses have the resolution to do it, I am far from discouraging the practice.

OF VOMITING.

From the delicate state of children, and the great sensibility of their organs, a vomiting or looseness may be induced by any thing that irritates the nerves of the stomach or intestines. Hence these disorders are much more common in childhood than in the more advanced periods of life. They are seldom, however, dangerous, and ought never to be considered as diseases, unless when they are violent, or continue so long as to exhaust the strength of the patient.

Vomiting may be excited by an over-quantity of food; by food that is of such a nature as to irritate the nerves of the stomach too much; or by the sensibility of the nerves being so much increased as to render them unable to bear the stimulus of even the mildest aliment.

When vomiting is occasioned by too much food, it ought to be promoted, as the cure will depend upon cleansing the stomach. This may be done either by a few grains of ipecacuanha, or a weak solution of emetic tartar, as mentioned before. When it is owing to food of an acrid or irritating quality, the diet ought to be changed, and aliment of a milder nature substituted in its stead.

When vomiting proceeds from an increased degree of sensibility, or too great an irritability of the nerves of the stomach, such medicines as have a tendency to brace and strengthen that organ, and to abate its sensibility, must be used. The first of these intentions may be answered by a slight infusion of the Peruvian bark, with the addition of a little rhubarb and orange-peel; and the second by the saline draughts, to which a few drops of liquid laudanum may occasionally be added.

In obstinate vomitings, the operation of internal medicines may be assisted by aromatic fomentations made with wine, applied warm to the pit of the stomach; or the use of the stomach plaster, with the addition of a little *Theriaca.*

OF A LOOSENESS.

A looseness may generally be reckoned salutary, when the stools are sour, slimy, green, or curdled. It is not the discharge, but the production of such stools, which ought

to be remedied. Even where the purging is thin and watery, it ought not to be checked too suddenly, as it often proves critical, especially when the child has caught cold, or an eruption on the skin has disappeared. Sometimes an evacuation of this kind succeeds a humid state of the atmosphere, in which case it may also prove of advantage, by carrying off a quantity of watery humours, which would otherwise tend to relax the habit.

As the principal intention in the cure of a looseness is to evacuate the offending matter, it is customary to give the patient a gentle vomit of ipecacuanha, and afterwards to exhibit small and frequent doses of rhubarb; interposing absorbent medicines to mitigate the acrimony of the humours. The best purge, however, in this case, is *magnesia alba*. It is at the same time absorbent and laxative, and operates without exciting gripes.

The antimonial wine, which acts both as an emetic and purge, is also an excellent medicine in this case. By being diluted with water, it may be proportioned to the weakest constitution: and, not being disagreeable to the palate, it may be repeated as often as occasion requires. Even one dose will frequently mitigate the disease, and pave the way for the use of absorbents. If, however, the patient's strength will permit, the medicine ought to be repeated every six or eight hours, till the stools begin to assume a more natural appearance; afterwards a longer space may be allowed to intervene between the doses. When it is necessary to repeat the medicine frequently, the doses ought always to be a little increased, as its efficacy is generally diminished by use.

Some, upon the first appearance of a looseness, fly immediately to the use of absorbent medicines and astringents. If these be administered before the offending humours are discharged, though the disease may appear to be mitigated for a little time, it soon afterwards breaks forth with greater violence, and often proves fatal. After proper evacuations, however, these medicines may be administered with considerable advantage.

Should any gripings or restlessness remain after the stomach and bowels have been cleansed, a tea-spoonful of the syrup of poppies may be given in a little simple cinnamon water three or four times a-day till these symptoms have ceased.

OF ERUPTIONS.

Children, while on the breast, are seldom free from eruptions of one kind or other. These, however, are not often dangerous, and ought never to be dried up but with the greatest caution. They tend to free the bodies of infants from hurtful humours, which, if retained, might produce fatal disorders.

The eruptions of children are chiefly owing to improper food and neglect of cleanliness. If a child be stuffed at all hours with food that its stomach is not able to digest, such food, not being properly assimilated, instead of nourishing the body, fills it with gross humours. These must either break out in forms of eruptions upon the skin, or remain in the body, and occasion fevers and other internal disorders. That neglect of cleanliness is a very general cause of eruptive disorders, must be obvious to every one. The children of the poor, and of all who despise cleanliness, are almost constantly found to swarm with vermin, and are generally covered with the scab, itch, and other eruptions.

When eruptions are the effect of improper food, or want of cleanliness, a proper attention to these alone will generally be sufficient to remove them. If this should not be the case, some drying medicines will be necessary. When they are applied, the body ought at the same time to be kept open, and cold is carefully to be avoided. We know no medicine that is more safe for drying up cutaneous eruptions than sulphur, provided it be prudently used. A little of the flower of sulphur may be mixed with fresh butter, oil, or hogslard, and the parts affected frequently touched with it.

The most obstinate of all the eruptions incident to children, are, the *tinea capitis*, or scabbed head, and chilblains. The scabbed head is often exceedingly difficult to cure, and sometimes indeed the cure proves worse than the disease. I have frequently known children seized with internal disorders, of which they died soon after their scabbed heads had been healed by the application of drying medicines.* The

* I some time ago saw a very striking instance of the danger of substituting drying medicines in the place of cleanliness and wholesome food, in the Foundling Hospital at Ackworth, where the children were grievous-

cure ought always first to be attempted by keeping the head very clean, cutting off the hair, combing and brushing away the scabs, &c. If this is not sufficient, let the head be shaved once a-week, washed daily with yellow soap, and gently anointed with a liniment made of train oil eight ounces, red precipitate, in fine powder, one dram. And if there be proud flesh, it should be touched with a bit of blue vitriol, or sprinkled with a little burnt alum. While these things are doing, the patient must be confined to a regular light diet; the body should be kept gently open; and cold, as far as possible, ought to be avoided. To prevent any bad consequences from stopping this discharge, it will be proper, especially in children of a gross habit, to make an issue in the arm or neck, which may be kept open till the patient becomes more strong, and the constitution be somewhat mended.

Chilblains commonly attack children in cold weather. They are generally occasioned by the feet or hands being kept long wet or cold, and afterwards suddenly heated. When children are cold, instead of taking exercise to warm themselves gradually, they run to the fire. This occasions a sudden rarefaction of the humours, and an infraction of the vessels; which being often repeated, the vessels are at last over-distended, and forced to give way.

To prevent it, violent cold and sudden heat must be equally avoided. When the parts begin to look red and swell, the patient ought to be purged, and to have the affected parts frequently rubbed with mustard and brandy, or something of a warming nature. They ought likewise to be covered with flannel, and kept warm and dry. Some apply warm ashes between cloths to the swelled parts, which frequently help to reduce them. When there is a sore, it must be dressed with Turner's cerate, the ointment of tutty,

ly afflicted with scabbed heads, and other cutaneous disorders. Upon inquiry it was found, that very little attention was paid either to the propriety or soundness of their provisions, and that cleanliness was totally neglected; accordingly it was advised that they should have more wholesome food, and be kept thoroughly clean. This advice however, was not followed. It was too troublesome to the servants, superintendents, &c. The business was to be done by medicine; which was accordingly attempted, but had nearly proved fatal to the whole house. Fevers, and other internal disorders, immediately appeared, and at length a putrid dysentery, which proved so infectious, that it carried off a great many of the children, and spread over a considerable part of the neighbouring country

the plaster of ceruse, or some other drying ointment. These sores are indeed troublesome, but seldom dangerous. They generally heal as soon as the warm weather sets in.

OF THE CROUP.

Children are often seized very suddenly with this disease, which, if not quickly relieved, proves mortal. It is known by various names in different parts of Britain. On the east coast of Scotland, it is called the *croup*. On the west, they call it the *chock* or *stuffing*. In some parts of England, where I have observed it, the good women call it the *rising of the lights*. It seems to be a species of *asthma*, attended with very acute and violent catarrhal symptoms.

This disease generally prevails in cold and wet seasons. It is most common upon the sea-coast, and in low marshy countries. Children of a gross and lax habit are most liable to it. I have sometimes known it hereditary. It generally attacks children in the night, after having been much exposed to damp, cold, easterly winds through the day. Damp houses, wet feet, thin shoes, wet clothes, or any thing that obstructs the perspiration, may occasion the croup.

It is attended with a frequent pulse, quick and laborious breathing, which is performed with a peculiar kind of croaking noise, that may be heard at a considerable distance. The voice is sharp and shrill, and the face is generally much flushed, though sometimes it is of a livid colour.

When a child is seized with the above symptoms, his feet should immediately be put into warm water. He ought likewise to be bled,* and to have a laxative clyster administered as soon as possible. He should be made to breathe over the steams of warm water and vinegar; or an emollient decoction, and emollient cataplasms or fomentations, may be applied round his neck. If the symptoms do not abate, a blistering-plaster must be applied round the neck, or between the shoulders, and the child may take frequently a table-spoonful of the following julep: Take penny-royal water three ounces, syrup of althea and of poppies, each one ounce; mix them together.

Asafœtida is found to have a good effect in this case. It

* In this disease bleeding is not always proper; but in very full habits it must certainly be of use.

may be both given in form of clyster, and taken by the mouth. Two drams of asafœtida may be dissolved in one ounce of Mindererus's spirit, and three ounces of penny-royal water. A table-spoonful of this mixture may be given every hour, or oftener, if the patient's stomach be able to bear it. If the child cannot be brought to take this medicine, two drams of the asafœtida may be dissolved in a common clyster, and administered every six or eight hours, till the violence of the disease abates.*

To prevent a return of the disorder, all those things which occasion it must be carefully avoided; as wet feet, cold, damp, easterly winds, &c. Children who have had frequent returns of this disease, or whose constitutions seem to dispose them to it, ought to have their diet properly regulated; all food that is viscid or hard of digestion, and all crude, raw, trashy fruits, are to be avoided. They ought likewise to have a drain constantly kept open in some part of their body, by means of a seton or issue. I have sometimes known a Burgundy-pitch plaster, worn continually between the shoulders for several years, have a very happy effect in preventing the return of this dreadful disorder.

OF TEETHING.

Dr Arbuthnot observes, that above a tenth part of infants die in teething, by symptoms proceeding from the irritation of the tender nervous parts of the jaws, occasioning inflammations, fevers, convulsions, gangrenes, &c. These symptoms are in a great measure owing to the great delicacy and exquisite sensibility of the nervous system at this time of life, which is too often increased by an effeminate education.

* I was lately favoured with a letter from Dr William Turnbull in London, a physician of great experience, and who, from his former situation on the north-east coast of England, had many opportunities of observing the symptoms and progress of this dangerous disease. The Doctor's sentiments differ very little from my own; he observes, that he never found blistering of any service; and recommends cataplasms of garlic, camphor, and Venice treacle to be applied both to the throat and soles of the feet. He likewise recommends boluses of camphor, castor, valerian root, salt of hartshorn, and musk, adapted to the age, strength, &c. of the patient; after which he advises two spoonfuls of the following decoction;—Take of garlic and distilled vinegar each an ounce, hyssop-water eight ounces; beat up the ingredients together, gradually mixing the water, and adding three ounces of honey. Let the whole be simmered over a gentle fire, and afterwards strained for use.

Hence it comes to pass, that children who are delicately brought up, always suffer most in teething, and often fall by convulsive disorders.

About the sixth or seventh month the teeth generally begin to make their appearance ; first, the *incisores* or foreteeth ; next the *canini*, or dog-teeth ; and, lastly, the *molares*, or grinders. About the seventh year, there comes a new set ; and about the twentieth, the two inner grinders, called *dentes sapientiæ*, the teeth of wisdom.

Children, about the time of cutting their teeth, slaver much, and have generally a looseness. When the teething is difficult, especially when the dog-teeth begin to make their way through the gums, the child has startings in his sleep, tumours of the gums, watchings, gripes, green stools, the thrush, fever, difficult breathing, and convulsions.

Difficult teething requires nearly the same treatment as an inflammatory disease. If the body be bound, it must be opened either by emollient clysters or gentle purgatives ; as manna, *magnesia alba*, rhubarb, senna, or the like. The food should be light, and in small quantity ; the drink plentiful, but weak and diluting, as infusions of balm, or of the lime-tree flowers ; to which about a third or fourth part of milk may be added.

If the fever be high, bleeding will be necessary ; but this in very young children ought always to be sparingly performed. It is an evacuation which they bear the worst of any. Purging, vomiting, or sweating, agree much better with them, and are generally more beneficial. Harris, however, observes, that when an inflammation appears, the physician will labour in vain, if the *cure* be not begun with applying a leech under each ear. If the child be seized with convulsion fits, a blistering plaster may be applied between the shoulders, or one behind each ear.

Sydenham says, that in fevers occasioned by teething he never found any remedy so effectual as two, three, or four drops of spirits of hartshorn in a spoonful of simple water, or other convenient vehicle, given every four hours. The number of doses may be four, five, or six. I have often prescribed this medicine with success, but always found a larger dose necessary. It may be given from five drops to fifteen or twenty, according to the age of the child, and when

costiveness does not forbid it, three or four drops of laudanum may be added to each dose.

In Scotland it is very common, when children are cutting their teeth, to put a small Burgundy-pitch plaster between their shoulders. This generally eases the tickling cough which attends teething, and is by no means an useless application. When the teeth are cut with difficulty, it ought to be kept on during the whole time of teething. It may be enlarged as occasion requires, and ought to be renewed at least once a fortnight.

Several things have been recommended for rubbing the gums, as oils, mucilages, &c.; but from these much is not to be expected. If any thing of this kind is to be used, we would recommend a little fine honey, which may be rubbed on with the finger three or four times a-day. Children are generally at this time disposed to chew whatever they get into their hands. For this reason they ought never to be without somewhat that will yield a little to the pressure of their gums, as a crust of bread, a wax candle, a bit of liquorice-root, or such like.

With regard to cutting the gums, we have seldom known it of any great benefit. In obstinate cases, however, it ought to be tried. It may be performed by the finger-nail, the edge of a sixpenny piece that is worn thin, or any sharp body which can be with safety introduced into the mouth; but the lancet, in a skilful hand, is certainly the most proper.

In order to render the teething less difficult, parents ought to take care that their children's food be light and wholesome, and that their nerves be braced by sufficient exercise without doors, the use of the cold bath, &c. Were these things duly regarded, they would have a much better effect than *teething necklaces*, or other nonsensical amulets, worn for that purpose.

OF THE RICKETS.

This disease generally attacks children between the age of nine months and two years. It appeared first in England about the time when manufactures began to flourish, and still prevails most in towns where the inhabitants follow sedentary employments, by which means they neglect either

to take proper exercise themselves, or to give it to their children.

Causes.—One cause of the rickets is diseased parents. Mothers of a weak relaxed habit, who neglect exercise, and live upon weak watery diet, can neither be expected to bring forth strong and healthy children, or to be able to nurse them, after they are brought forth. Accordingly we find that the children of such women generally die of the rickets, the scrophula, consumptions, or such like diseases. Children begotten by men in the decline of life, who are subject to the gout, the gravel, or other chronic diseases, or who have been often afflicted with the venereal disease in their youth, are likewise very liable to the rickets.

Any disorder that weakens the constitution or relaxes the habit of children, as the small-pox, measles, teething, the hooping-cough, &c. disposes them to this disease. It may likewise be occasioned by improper diet, as food that is either too weak and watery, or so viscid that the stomach cannot digest it.

But nursing is the chief cause of this disease. When the nurse is either diseased, or has not enough of milk to nourish the child, it cannot thrive. But children suffer oftener by want of care in nurses than want of food. Allowing an infant to lie or sit too much, or not keeping it thoroughly clean in its clothes, has the most pernicious effects.

The want of free air is likewise very hurtful to children in this respect. When a nurse lives in a close small house, where the air is damp and confined, and is too indolent to carry her child abroad into the open air, it will hardly escape this disease. A healthy child should always be in motion, unless when asleep; if it be suffered to lie or sit, instead of being tossed and dandled about, it will not thrive.

Symptoms.—At the beginning of this disease the child's flesh grows soft and flabby; its strength is diminished; it loses its wonted cheerfulness, looks more grave and composed than is natural for its age, and does not choose to be moved. The head and belly become too large in proportion to the other parts; the face appears full, and the complexion florid. Afterwards the bones begin to be affected, especially in the more soft and spungy parts. Hence the wrists and ancles become thicker than usual; the spine or

back-bone puts on an unnatural shape; the breast is likewise often deformed; and the bones of the arms and legs grow crooked. All these symptoms vary according to the violence of the disease. The pulse is generally quick, but feeble; the appetite and digestion for the most part bad; the teeth come slowly and with difficulty, and they often rot and fall out afterwards. Ricketty children generally have great acuteness of mind, and an understanding above their years. Whether this is owing to their being more in the company of adults than other children, or to the preternatural enlargement of the brain, is not material.

Regimen.—As this disease is always attended with evident signs of weakness and relaxation, our chief aim in the cure must be to brace and strengthen the solids, and to promote digestion and the due preparation of the fluids. These important ends will be best answered by wholesome nourishing diet, suited to the age and strength of the patient, open dry air, and sufficient exercise. If the child has a bad nurse, who either neglects her duty, or does not understand it, she should be changed. If the season be cold, the child ought to be kept warm; and when the weather is hot, it ought to be kept cool; as sweating is apt to weaken it, and too great a degree of cold has the same effect. The limbs should be rubbed frequently with a warm hand, and the child kept as cheerful as possible.

The diet ought to be dry and nourishing, as good bread, roasted flesh, &c. Biscuit is generally reckoned the best bread; and pigeons, pullets, veal, rabbits, or mutton roasted or minced, are the most proper meat. If the child be too young for animal food, he may have rice, millet, or pearl-barley, boiled with raisins, to which may be added a little wine and spice. His drink may be good claret, mixed with an equal quantity of water. Those who cannot afford claret, may give the child now and then a wine-glass of mild ale, or good porter.

Medicine.—Medicines are here of little avail. The disease may often be cured by the nurse, but seldom by the physician. In children of a gross habit, gentle vomits and repeated purges of rhubarb may sometimes be of use, but they will seldom carry off the disease; that must depend chiefly upon such things as brace and strengthen the system: for which purpose, besides the regimen mentioned

above, we would recommend the cold-bath, especially in the warm season. It must however be used with prudence, as some ricketty children cannot bear it. The best time for using the cold-bath is in the morning, and the child should be well rubbed with a dry cloth immediately after he comes out of it. If the child should be weakened by the cold-bath, it must be discontinued.

Sometimes issues have been found beneficial in this disease. They are peculiarly necessary for children who abound with gross humours. An infusion of the Peruvian bark in wine or ale would be of service, were it possible to bring children to take it. We might here mention many other medicines which have been recommended for the rickets; but as there is far more danger in trusting to these than in neglecting them altogether, we choose rather to pass them over, and to recommend a proper regimen as the thing chiefly to be depended on.

OF CONVULSIONS.

Though more children are said to die of convulsions than of any other disease, yet they are for the most part only a symptom of some other malady. Whatever greatly irritates or stimulates the nerves may occasion convulsions. Hence infants whose nerves are easily affected, are often thrown into convulsions by any thing that irritates the alimentary canal; likewise by teething, strait clothes, the approach of the small-pox, measles, or other eruptive diseases.

When convulsions proceed from an irritation of the stomach or bowels, whatever clears them of their acrid contents, or renders these mild and inoffensive, will generally perform a cure; wherefore, if the child be costive, the best way will be to begin with a clyster, and afterwards to give a gentle vomit, which may be repeated occasionally, and the body in the mean time kept open by gentle doses of *magnesia alba*, or small quantities of rhubarb mixed with the powder of crabs' claws.

Convulsions which precede the eruption of the small-pox, or measles, generally go off upon these making their appearance. The principal danger in this case arises from the fear and apprehension of those who have the care of the patient. Convulsions are very alarming, and something must

be done to appease the affrighted parents, nurses, &c. Hence the unhappy infant often undergoes bleeding, blistering, and several other operations, to the great danger of its life, when a little time, bathing the feet in warm water, and throwing in a mild clyster, would have set all to rights.

When convulsion fits arise from the cutting of teeth, besides gentle evacuations, we would recommend blistering, and the use of antispasmodic medicines, as the tincture of soot, asafœtida, or castor. A few drops of any of these may be mixed in a cup of white-wine whey, and given occasionally.

When convulsions proceed from any external cause, as the pressure occasioned by strait clothes or bandages, &c. these ought immediately to be removed; though in this case taking away the cause will not always remove the effect, yet it ought to be done. It is not likely that the patient will recover, as long as the cause which first gave rise to the disorder continues to act.

When a child is seized with convulsions, without having any complaint in the bowels, or symptoms of teething; or any rash, or other discharge which has been suddenly dried up; we have reason to conclude that it is a primary disease, and proceeds immediately from the brain. Cases of this kind, however, happen but seldom; which is very fortunate, as little can be done to relieve the unhappy patient. When a disease proceeds from an original fault in the formation or structure of the brain itself, we cannot expect that it should yield to medicine. But as this is not always the cause, even of convulsions which proceed immediately from the brain, some attempts should be made to remove them. The chief intention to be pursued for this purpose, is to make some derivation from the head, by blistering, purging, and the like. Should these fail, issues or setons may be put in the neck, or between the shoulders.

OF WATER IN THE HEAD.

Though water in the head, or a dropsy of the brain, may affect adults as well as children, yet, as the latter are more peculiarly liable to it, we thought it would be most proper to place it among the diseases of infants.

Causes.—A dropsy of the brain may proceed from in-

juries done to the brain itself by falls, blows, or the like; it may likewise proceed from an original laxity or weakness of the brain; from schirrous tumours or excrescences within the skull; a thin watery state of the blood; a diminished secretion of urine; a sudden check of the perspiration; and lastly, from tedious and lingering diseases, which waste and consume the patient.

SYMPTOMS.—This disease has at first the appearance of a slow fever; the patient complains of a pain in the crown of his head, or over his eyes; he shuns the light; is sick, and sometimes vomits; his pulse is irregular, and generally low; though he seems heavy and dull, yet he does not sleep: he is sometimes delirious, and frequently sees objects double; towards the end of this commonly fatal disease, the pulse becomes more frequent, the pupils are generally dilated, the cheeks flushed, the patient becomes comatose, and convulsions ensue.

MEDICINE.—No medicine has hitherto been found sufficient to carry off a dropsy of the brain. It is laudable, however, to make some attempts, as time or chance may bring many things to light, of which at present we have no idea. The medicines generally used are, purges of rhubarb or jalap, with calomel, and blistering-plasters applied to the neck or back-part of the head. To which we would beg leave to add diuretics, or medicines which promote the secretion of urine, such as are recommended in the common dropsy. A discharge from the nose ought likewise to be promoted by causing the patient to snuff the powder of asarum, white hellebore, or the like.

Some practitioners have of late pretended to cure this disease by the use of mercury. I have not been so happy as to see any instance of a cure being performed in a confirmed dropsy of the brain; but in so desperate a malady every thing deserves a trial.*

* One reason why this disease is seldom or never cured, may be, that it is seldom known till too far advanced to admit of remedy. Did parents watch the first symptoms, and call a physician in due time, I am inclined to think that something might be done. But these symptoms are not yet sufficiently known, and are often mistaken even by physicians themselves. Of this I lately saw a striking instance in a patient, attended by an eminent practitioner of this city, who had all along mistaken the disease for teething.

CHAP. L.

OF SURGERY.

To describe all the operations of surgery, and to point out the different diseases in which these operations are necessary, would extend this article far beyond the limits allotted to it; we must therefore confine our observations to such cases as most generally occur, and in which proper assistance is either not asked, or not always to be obtained.

Though an acquaintance with the structure of the human body is indispensably necessary to qualify a man for being an expert surgeon; yet many things may be done to save the lives of their fellow-men in emergencies, by those who are no adepts in anatomy. It is amazing with what facility the peasants daily perform operations upon brute animals, which are not of a less difficult nature than many of those performed on the human species: yet they seldom fail of success.

Indeed every man is in some measure a surgeon, whether he will or not. He feels an inclination to assist his fellow-men in distress, and accidents happen every hour which give occasion to exercise this feeling. The feelings of the heart, however, when not directed by the judgment, are apt to mislead. Thus one, by a rash attempt to save his friend, may sometimes destroy him; while another, for fear of doing amiss, stands still and sees his bosom friend expire, without so much as attempting to relieve him, even when the means are in his power. As every good man would wish to steer a course different from either of these, it will no doubt be agreeable to him to know what ought to be done upon such emergencies.

OF BLEEDING.

No operation of surgery is so frequently necessary as bleeding; it ought therefore to be very generally understood. But though practised by midwives, gardeners, blacksmiths, &c. we have reason to believe that very few know when it is proper. Even physicians themselves have been so much the dupes of theory in this article, as to render it the sub-

ject of ridicule. It is, however, an operation of great importance, and must, when seasonably and properly performed, be of singular service to those in distress.

Bleeding is proper at the beginning of all inflammatory fevers, as pleurisies, peripneumonies, &c. It is likewise proper in all topical inflammations, as those of the intestines, womb, bladder, stomach, kidneys, throat, eyes, &c.; as also in the asthma, sciatic pains, coughs, head-aches, rheumatisms, the apoplexy, epilepsy, and bloody-flux. After falls, blows, bruises, or any violent hurt received either externally or internally, bleeding is necessary. It is likewise necessary for persons who have had the misfortune to be strangled, drowned, suffocated with foul air, the fumes of metal, or the like. In a word, whenever the vital motions have been suddenly stopped from any cause whatever, except in swoonings occasioned by mere weakness or hysteric affections, it is proper to open a vein. But in all disorders proceeding from a relaxation of the solids, and an impoverished state of the blood, as dropsies, cacochymies, &c. bleeding is improper.

Bleeding for topical inflammations ought always to be performed as near the part affected as possible. When this can be done with a lancet, it is to be preferred to any other method; but where a vein cannot be found, recourse must be had to leeches or cupping.

The quantity of blood to be let must always be regulated by the strength, age, constitution, manner of life, and other circumstances relating to the patient. It would be ridiculous to suppose that a child could bear to lose as much blood as a grown person, or that a delicate lady should be bled to the same extent as a robust man.

From whatever part of the body blood is to be let, a bandage must be applied between that part and the heart. As it is often necessary, in order to raise the vein, to make the bandage pretty tight, it will be proper in such cases, as soon as the blood begins to flow, to slacken it a little. The bandage ought to be applied at least an inch, or an inch and a half, from the place where the wound is intended to be made.

Persons not skilled in anatomy ought never to bleed in a vein that lies over an artery or a tendon, if they can avoid it. The former may easily be known from its pulsation or

beating, and the latter from its feeling hard or tight like a whipcord under the finger.

It was formerly a rule, even among those who had the character of being regular practitioners, to bleed their patients in certain diseases till they fainted. Surely a more ridiculous rule could not be proposed. One person will faint at the very sight of a lancet, while another will lose almost the whole blood of his body before he faints. Swooning depends more upon the state of the mind than of the body; besides, it may often be occasioned or prevented by the manner in which the operation is performed.

Children are generally bled with leeches. This, though sometimes necessary, is a very troublesome and uncertain practice. It is impossible to know what quantity of blood is taken away by leeches; besides, the bleeding is often very difficult to stop, and the wounds are not easily healed. Would those who practise bleeding take a little more pains, and accustom themselves to bleed children, they would not find it such a difficult operation as they imagine.

Certain hurtful prejudices with regard to bleeding still prevail among the country people. They talk, for instance, of head-veins, heart-veins, breast-veins, &c. and believe that bleeding in these will certainly cure all diseases of the parts from whence they are supposed to come, without considering that the blood-vessels arise from the heart, and return to it again; for which reason, unless in topical inflammations, it signifies very little from what part of the body blood is taken. But this, though a foolish prejudice, is not near so hurtful as the vulgar notion that the first bleeding will perform wonders. This belief makes them often postpone the operation when necessary, in order to reserve it for some more important occasion, and, when they think themselves in extreme danger, they fly to it for relief, whether it be proper or not. Bleeding at certain stated periods or seasons has likewise bad effects.

It is a common notion that bleeding in the feet draws the humours downwards, and consequently cures diseases of the head and other superior parts; but we have already observed, that in all topical affections, the blood ought to be drawn as near the part as possible. When it is necessary, however, to bleed in the foot or hand, as the veins are small, and the bleeding is apt to stop too soon, the parts ought to

be immersed in warm water, and kept there till a sufficient quantity of blood be let.

We shall not spend time in describing the manner of performing this operation; that will be better learned by example than precept. Twenty pages of description would not convey so just an idea of the operation as seeing it once performed by an expert hand. Neither is it necessary to point out the different parts of the body from whence blood may be taken, as the arm, foot, forehead, temples, neck, &c. These will readily occur to every intelligent person, and the foregoing observations will be sufficient for determining which of them is most proper upon any particular occasion. In all cases where the intention is merely to lessen the general mass of blood, the arm is the most commodious part of the body in which the operation can be performed.

OF INFLAMMATIONS AND ABSCESSES.

From whatever cause an inflammation proceeds, it must terminate either by dispersion, suppuration, or gangrene. Though it is impossible to foretel with certainty in which of these ways any particular inflammation will terminate, yet a probable conjecture may be formed with regard to the event, from a knowledge of the patient's age and constitution. Inflammations happening in a slight degree upon colds, and without any previous indisposition, will most probably be dispersed; those which follow close upon a fever, or happen to persons of a gross habit of body, will generally suppurate; and those which attack very old people, or persons of a dropsical habit, will have a strong tendency to gangrene.

If the inflammation be slight, and the constitution sound, the dispersion ought always to be attempted. This will be best promoted by a slender diluting diet, plentiful bleeding, and repeated purges. The part itself must be fomented, and, if the skin be very tense, it may be embrocated with a mixture of three-fourths of sweet oil, and one-fourth of vinegar, and afterwards covered with a piece of wax-plaster.

If, notwithstanding these applications, the symptomatic fever increases, and the tumour becomes larger, with violent pain and pulsation, it will be proper to promote the suppuration. The best application for this purpose is a soft poultice, which may be renewed twice a-day. If the

suppuration proceeds but slowly, a raw onion cut small or bruised may be spread upon the poultice. When the abscess is ripe or fit for opening, which may easily be known from the thinness of the skin in the most prominent part of it, fluctuation of matter, which may be felt under the finger, and, generally speaking, an abatement of the pain, it may be opened either with a lancet, or by means of caustic.

The last way in which an inflammation terminates, is in a gangrene or mortification, the approach of which may be known by the following symptoms: the inflammation loses its redness, and becomes duskish or livid; the tension of the skin goes off, and it feels flabby; little bladders filled with ichor of different colours spread all over it; the tumour subsides, and from a duskish complexion becomes black; a quick low pulse, with cold clammy sweats, are the immediate forerunners of death.

When these symptoms first appear, the part ought to be dressed with London treacle, or a cataplasm made of lixivium and bran. Should the symptoms become worse, the part must be scarified, and afterwards dressed with basilicum softened with oil of turpentine. All the dressings must be applied warm. With regard to internal medicines, the patient must be supported with generous cordials, and the Peruvian bark exhibited in as large doses as the stomach will bear it. If the mortified parts should separate, the wound will become a common ulcer, and must be treated accordingly.

This article includes the treatment of all those diseases which, in different parts of the country, go by the names of *biles*, *imposthumes*, *whitloes*, &c. They are all abscesses in consequence of a previous inflammation, which, if possible, ought to be discussed; but, when this cannot be done, the suppuration should be promoted, and the matter discharged by an incision, if necessary; afterwards the sore may be dressed with yellow basilicum, or some other digestive ointment.

OF WOUNDS.

No part of medicine has been more mistaken than the treatment or cure of wounds. Mankind in general believe that certain herbs, ointments, and plasters, are possessed of

wonderful healing powers, and imagine that no wound can be cured without the application of them. It is, however, a fact, that no external application whatever contributes towards the cure of a wound, any other way than by keeping the parts soft, clean, and defending them from the external air, which may be as effectually done by dry lint, as by the most pompous applications, while it is exempt from many of the bad consequences attending them.

The same observation holds with respect to internal applications. These only promote the cure of wounds as far as they tend to prevent a fever, or to remove any cause that might obstruct or impede the operations of Nature. It is Nature alone that cures wounds. All that art can do is to remove obstacles, and to put the parts in such a condition as is the most favourable to Nature's efforts.

With this simple view we shall consider the treatment of wounds, and endeavour to point out such steps as ought to be taken to facilitate their cure.

The first thing to be done, when a person has received a wound, is to examine whether any foreign body be lodged in it, as wood, stone, iron, lead, glass, dirt, bits of cloth, or the like. These, if possible, ought to be extracted, and the wound cleaned before any dressings be applied. When that cannot be effected with safety on account of the patient's weakness or loss of blood, they must be suffered to remain in the wound, and afterwards extracted when he is more able to bear it.

When a wound penetrates into any of the cavities of the body, as the breast, the bowels, &c. or where any considerable blood-vessel is cut, a skilful surgeon ought immediately to be called, otherwise the patient may lose his life. But sometimes the discharge of blood is so great, that if it be not stopped, the patient may die, even before a surgeon, though at no great distance, can arrive. In this case, something must be done by those who are present. If the wound be in any of the limbs, the bleeding may generally be stopped by applying a tight ligature or bandage round the member a little above the wound. The best method of doing this is to put a strong broad garter round the part, but so slack as easily to admit a small piece of stick to be put under it, which must be twisted, in the same manner as a countryman does a cart-rope to secure

his loading, till the bleeding stops. Whenever this is the case, he must take care to twist it no longer, as straining it too much might occasion an inflammation of the parts, and endanger a gangrene.

In parts where this bandage cannot be applied, various other methods may be tried to stop the bleeding, as the application of styptics, astringents, &c. Cloths dipped in a solution of blue vitriol in water, or the *styptic water* of the dispensatories, may be applied to the wound. When these cannot be obtained, strong spirits of wine may be used. Some recommend the *agaric** of the oak as preferable to any of the other styptics; and indeed it deserves considerable encomiums. It is easily obtained, and ought to be kept in every family in case of accidents. A piece of it must be laid upon the wound, and covered with a good deal of lint, above which a bandage may be applied so tight as to keep it firmly on.

Though spirits, tinctures, and hot balsams, may be used, in order to stop the bleeding when it is excessive, they are improper at other times. They do not promote but retard the cure, and often change a simple wound into an ulcer. People imagine, because hot balsams congeal the blood, and seem, as it were, to solder up the wound, that they therefore heal it; but this is only a deception. They may indeed stop the flowing blood, by searing the mouths of the vessels: but, by rendering the parts callous, they obstruct the cure.

In slight wounds, which do not penetrate much deeper than the skin, the best application is a bit of the common black sticking-plaster. This keeps the sides of the wound together, and prevents the air from hurting it, which is all

* Dr Tissot, in his *Advice to the People*, gives the following directions for gathering, preparing, and applying the agaric.—'Gather in autumn,' says he, 'while the fine weather lasts,' the agaric of the oak, which is a kind of fungus or excrescence issuing from the wood of that tree. It consists at first of four parts which present themselves successively: 1. The outward rind or skin, which may be thrown away. 2. The part immediately under this rind, which is the best of all. This is to be beat well with a hammer, till it becomes soft and very pliable. This is the only preparation it requires, and a slice of it of a proper size is to be applied directly over the bursting open blood-vessels. It constringes and brings them close together, stops the bleeding, and generally falls off at the end of two days. 3. The third part adhering to the second, may serve to stop the bleeding from the smaller vessels; and the fourth and last part may be reduced to powder, as conducing to the same purpose.'—Where the agaric cannot be had, sponge may be used in its stead. It must be applied in the same manner, and has nearly the same effects.

that is necessary. When a wound penetrates deep, it is not safe to keep its lips quite close; this keeps in the matter, and is apt to make the wound fester. In this case the best way is to fill the wound with soft lint, commonly called *caddis*. It, however, must not be stuffed in too hard, otherwise it will do hurt. The lint may be covered with a cloth dipped in oil, or spread with the common wax-plaster; and the whole must be kept on by a proper bandage.

We shall not spend time in describing the different bandages that may be proper for wounds in different parts of the body; common sense will generally suggest the most commodious method of applying a bandage; besides, descriptions of this kind are not easily understood or remembered.

The first dressing ought to continue on for at least two days; after which it may be removed, and fresh lint applied as before. If any part of the first dressing sticks so close as not to be removed with ease or safety to the patient, it may be allowed to continue, and fresh lint dipped in sweet oil laid over it. This will soften it, so as to make it come off easily at next dressing. Afterwards, the wound may be dressed twice a-day in the same manner till it be quite healed. Those who are fond of salves or ointments, may, after the wound is become very superficial, dress it with the yellow *basilicum*; and if fungous, or what is called *proud flesh*, should rise in the wound, it may be checked, by mixing with the ointment a little burnt alum or red precipitate of mercury.

When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of a plaster, and should be changed twice a-day.

If the wound be large, and there is reason to fear an inflammation, the patient should be kept on a very low diet. He must abstain from flesh, strong liquors, and every thing that is of a heating nature. If he be of a full habit, and has lost but little blood from the wound, he must be bled; and, if the symptoms be urgent, the operation may be repeated. But when the patient has been greatly weakened by loss of blood from the wound, it will be dangerous to bleed him, even though a fever should ensue. Nature should never be too far exhausted. It is always more safe

to allow her to struggle with the disease in her own way, than to sink the patient's strength by excessive evacuations.

Wounded persons ought to be kept perfectly quiet and easy. Every thing that ruffles the mind, or moves the passions, as love, anger, fear, excessive joy, &c. are very hurtful. They ought, above all things, to abstain from venery. The body should be kept gently open, either by laxative clysters, or by a cool vegetable diet, as roasted apples, stewed prunes, boiled spinage, and such like.

OF BURNS.

In slight burns, which do not break the skin, it is customary to hold the part near the fire for a competent time, to rub it with salt, or to lay a compress upon it, dipped in spirits of wine or brandy. But when the burn has penetrated so deep as to blister or break the skin, it must be dressed with the emollient and gently drying ointment, commonly called *Turner's cerate.* This may be mixed with an equal quantity of fresh olive-oil, and spread upon a soft rag, and applied to the part affected. When this ointment cannot be had, an egg may be beat up with about an equal quantity of the sweetest salad oil. This will serve very well, till a proper ointment can be prepared. When the burning is very deep, after the first two or three days, it should be dressed with equal parts of yellow *basilicum* and *Turner's cerate*, mixed together.

When the burn is violent, or has occasioned a high degree of inflammation, and there is reason to fear a gangrene or mortification, the same means must be used to prevent, as are recommended in other violent inflammations. The patient in this case, must live low, and drink freely of weak diluting liquors. He must likewise be bled, and have his body kept open. But if the burnt parts should become livid or black, with other symptoms of mortification, it will be necessary to bathe them frequently with warm camphorated spirits of wine, tincture of myrrh, or other antiseptics, mixed with a decoction of the bark. In this case the bark must likewise be taken internally, and the patient's diet must be more generous, with wine, &c.

As example teaches better than precept, I shall relate the treatment of the most dreadful case of this kind that has

occurred in my practice. A middle-aged man, of a good constitution, fell into a large vessel full of boiling water, and miserably scalded about one half of his body. As his clothes were on, the burning in some parts was very deep before they could be got off. For the first two days the scalded parts had been frequently anointed with a mixture of lime-water and oil, which is a very proper application for recent burnings. On the third day, when I first saw him, his fever was high, and his body costive, for which he was bled, and had an emollient clyster administered. Poultices of bread and milk, softened with fresh butter, were likewise applied to the affected parts, to abate the heat and inflammation. His fever still continuing high, he was bled a second time, was kept strictly on the cooling regimen, took the saline mixture with small doses of nitre, and had an emollient clyster administered once a-day. When the inflammation began to abate, the parts were dressed with a digestive composed of brown cerate and yellow basilicum. Where any black spots appeared, they were slightly scarified and touched with the tincture of myrrh; and to prevent their spreading, the Peruvian bark was administered. By this course, the man was so well in three weeks as to be able to attend his business.

OF BRUISES.

Bruises are generally productive of worse consequences than wounds. The danger from them does not appear immediately, by which means it often happens that they are neglected. It is needless to give any definition of a disease so universally known; we shall therefore proceed to point out the method of treating it.

In slight bruises it will be sufficient to bathe the part with warm vinegar, to which a little brandy or rum may occasionally be added, and to keep cloths wet with this mixture constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases.

In some parts of the country the peasants apply to a recent bruise a cataplasm of fresh cow-dung. I have often seen this cataplasm applied to violent contusions, occasioned

by blows, falls, bruises, and such like, and never knew it fail to have a good effect.

When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak and of an opening nature; as whey, sweetened with honey, decoctions of tamarinds, barley, cream-tartar-whey, and such like. The bruised part must be bathed with vinegar and water, as directed above; and a poultice made by boiling crumb of bread, elder-flowers, and camomile-flowers, in equal quantities of vinegar and water, applied to it. This poultice is peculiarly proper when a wound is joined to the bruise. It may be renewed two or three times a-day.

As the structure of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore very difficult to cure. If the bone be affected, the sore will not heal before an exfoliation takes place; that is, before the diseased part of the bone separates and comes out through the wound. This is often a very slow operation, and may even require several years to be completed. Hence it happens that these sores are frequently mistaken for the king's-evil, and treated as such, though in fact they proceed solely from the injury which the solid parts received from the blow.

Patients in this situation are pestered with different advices. Every one who sees them proposes a new remedy, till the sore is so much irritated with various and opposite applications, that it is often at length rendered absolutely incurable. The best method of managing such sores is, to take care that the patient's constitution does not suffer by confinement or improper medicine, and to apply nothing to them besides simple ointment spread upon soft lint, over which a poultice of bread and milk, with boiled camomile-flowers, or the like, may be put, to nourish the part, and keep it soft and warm. Nature, thus assisted, will generally in time operate a cure, by throwing off the diseased parts of the bone, after which the sore soon heals.

OF ULCERS.

Ulcers may be the consequence of wounds, bruises, or imposthumes improperly treated; they may likewise pro-

ceed from an ill state of the humours, or what may be called a bad habit of body.

In the latter case, they ought not to be hastily dried up, otherwise it may prove fatal to the patient. Ulcers happen most commonly in the decline of life; and persons who neglect exercise, and live grossly, are most liable to them. They might often be prevented by retrenching some part of the solid food, or by opening artificial drains, as issues, setons, or the like.

An ulcer may be distinguished from a wound by its discharging a thin watery humour, which is often so acrid as to inflame and corrode the skin; by the hardness and perpendicular situation of its sides or edges; by the time of its duration, &c.

It requires considerable skill to be able to judge whether or not an ulcer ought to be dried up. In general, all ulcers which proceed from a bad habit of body, should be suffered to continue open, at least till the constitution has been so far changed by proper regimen, or the use of medicine, that they seem disposed to heal of their own accord. Ulcers which are the effect of malignant fevers, or other acute diseases, may generally be healed with safety after the health has been restored for some time. The cure ought not, however, to be attempted too soon, nor at any time without the use of purging medicines and a proper regimen. When wounds and bruises have, by wrong treatment, degenerated into ulcers, if the constitution be good, they may generally be healed with safety. When ulcers either accompany chronical diseases, or come in their stead, they must be cautiously healed. If an ulcer conduces to the patient's health, from whatever cause it proceeds, it ought not to be healed; but if, on the contrary, it wastes the strength and consumes the patient by a slow fever, it should be healed as soon as possible.

We would earnestly recommend a strict attention to these particulars to all who have the misfortune to labour under this disorder, particularly persons in the decline of life; as we have frequently known people throw away their lives by the want of it, while they were extolling and generously rewarding those whom they ought to have looked upon as their executioners.

The most proper regimen for promoting the cure of ul-

cers, is to avoid all spices, salted and high-seasoned food, all strong liquors, and to lessen the usual quantity of flesh meat. The body ought to be kept gently open by a diet consisting chiefly of cooling laxative vegetables, and by drinking butter-milk, whey sweetened with honey, or the like. The patient ought to be kept cheerful, and should take as much exercise as he can easily bear.

When the bottom and sides of an ulcer seem hard and callous, they may be sprinkled twice a-day with a little red precipitate of mercury, and afterwards dressed with the yellow *basilicum* ointment. Sometimes it will be necessary to have the edges of the ulcers scarified with the lancet.

Lime-water has frequently been known to have very happy effects in the cure of obstinate ulcers. It may be used in the same manner as directed for the stone and gravel.

My late learned and ingenious friend Dr Whyte, strongly recommends the use of the solution of corrosive sublimate of mercury in brandy, for the cure of obstinate ill-conditioned ulcers. I have frequently found this medicine, when given according to the Doctor's directions, prove very successful. The dose is a table-spoonful night and morning; at the same time washing the sore twice or thrice a-day with it. In a letter which I had from the Doctor a little before his death he informed me, 'That he observed washing the sore thrice a-day with the solution of a triple strength was very beneficial.'*

A fistulous ulcer can seldom be cured without an operation; it must either be laid open, so as to have its callous parts destroyed by some corrosive application, or they must be entirely cut away by the knife; but as this operation requires the hand of an expert surgeon, there is no occasion to describe it. Ulcers about the anus are most apt to become fistulous, and are very difficult to cure. Some indeed pretend to have found Ward's fistula-paste very successful in this complaint. It is not a dangerous medicine, and being easily procured, it may deserve a trial; but as these ulcers generally proceed from an ill habit of body, they will seldom yield to any thing except a long course of regimen

* In ulcers of the lower limbs great benefit is often received from tight rollers, or wearing a laced stocking, as this prevents the flux of humours to the sores, and disposes them to heal.

assisted by medicines, which are calculated to correct that particular habit, and to induce an almost total change in the constitution.

CHAP. LI.

OF DISLOCATIONS.

When a bone is moved out of its place or articulation so as to impede its proper functions, it is said to be *luxated* or *dislocated*. As this often happens to persons in situations where no medical assistance can be obtained, by which means limbs, and even lives, are frequently lost, we shall endeavour to point out the method of reducing the most common luxations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient, than the most expert surgeon can, after the swelling and inflammation have come on. When these are present, it is difficult to know the state of the joint, and dangerous to attempt a reduction; and by waiting till they are gone off, the muscles become so relaxed, and the cavity filled up, that the bone can never afterwards be retained in its place.

A recent dislocation may generally be reduced by extension alone, which must always be greater or less according to the strength of the muscles which move the joint, the age, robustness, and other circumstances of the patient. When the bone has been out of its place for any considerable time, and a swelling or inflammation has come on, it will be necessary to bleed the patient, and, after fomenting the part, to apply hot poultices with vinegar to it for some time before the reduction is attempted.

All that is necessary after the reduction, is to apply cloths dipt in vinegar or camphorated spirits of wine to the part, and to keep it perfectly easy. Many bad consequences proceed from the neglect of this rule. A dislocation seldom happens without the tendons and ligaments of the joint being stretched, and sometimes torn. When these are kept easy till they recover their strength and tone, all goes on very well; but if the injury be increased by too frequent an

exertion of the parts, no wonder if they be found weak and diseased ever after.

DISLOCATION OF THE JAW.

The lower jaw may be luxated by yawning, blows, falls, chewing hard substances, or the like. It is easily known from the patient's being unable to shut his mouth, or to eat any thing, as the teeth of the under jaw do not correspond with those of the upper; besides, the chin either hangs down or is thrown towards one side, and the patient is neither able to speak distinctly, nor to swallow without considerable difficulty.

The usual method of reducing a dislocated jaw, is to set the patient upon a low stool, so as an assistant may hold the head firm by pressing it against his breast. The operator is then to thrust his two thumbs, being first wrapt up with linen cloths that they may not slip, as far back into the patient's mouth as he can, while his fingers are applied to the jaw externally. After he has got firm hold of the jaw, he is to press it strongly downwards and backwards, by which means the elapsed heads of the jaw may be easily pushed into their former cavities.

The peasants in some parts of the country have a peculiar way of performing this operation. One of them puts a handkerchief under the patient's chin, then turning his back to that of the patient, pulls him up by the chin so as to suspend him from the ground. This method often succeeds, but we think it a dangerous one, and therefore recommend the former.

DISLOCATION OF THE NECK.

The neck may be dislocated by falls, violent blows, or the like. In this case, if the patient receives no assistance, he soon dies, which makes people imagine the neck was broken; it is, however, for the most part only partially dislocated, and may be reduced by almost any person who has resolution enough to attempt it. A complete dislocation of the neck is instantaneous death.

When the neck is dislocated, the patient is immediately deprived of all sense and motion; his neck swells, his coun-

tenance appears bloated; his chin lies upon his breast, and his face is generally turned towards one side.

To reduce this dislocation, the unhappy person should immediately be laid upon his back on the ground, and the operator must place himself behind him so as to be able to lay hold of his head with both hands, while he makes a resistance by placing his knees against the patient's shoulders. In this posture he must pull the head with considerable force, gently twisting it at the same time, if the face be turned to one side, till he perceives that the joint is replaced, which may be known from the noise which the bones generally make when going in, the patient's beginning to breathe, and the head continuing in its natural posture.

This is one of those operations which is more easy to perform than describe. I have known instances of its being happily performed even by women, and often by men of no medical education. After the neck is reduced, the patient ought to be bled, and should be suffered to rest for some days, till the parts recover their proper tone.

DISLOCATION OF THE RIBS.

As the articulation of the ribs with the back-bone is very strong, they are not often dislocated. It does, however, sometimes happen, which is a sufficient reason for our taking notice of it. When a rib is dislocated either upwards or downwards, in order to replace it, the patient should be laid upon his belly on a table, and the operator must endeavour to push the head of the bone into its proper place. Should this method not succeed, the arm of the disordered side may be suspended over a gate or ladder, and while the ribs are thus stretched asunder, the heads of such as are out of place may be thrust into their former situation.

Those dislocations wherein the heads of the ribs are forced inwards, are both more dangerous and most difficult to reduce, as neither the hand nor any instrument can be applied internally to direct the luxated heads of the ribs. Almost the only thing that can be done is, to lay the patient upon his belly over a cask, or some gibbous body, and to move the fore part of the rib inwards towards the back, sometimes shaking it; by this means the heads of the luxated ribs may slip into their former place.

DISLOCATION OF THE SHOULDER.

The humerus, or upper bone of the arm, may be dislocated in various directions; it happens, however, most frequently downwards, but very seldom directly upwards. From the nature of its articulation, as well as from its exposure to external injuries, this bone is the most subject to dislocation of any in the body. A dislocation of the humerus may be known by a depression or cavity on the top of the shoulder, and an inability to move the arm. When the dislocation is downward or forward, the arm is elongated, and a ball or lump is perceived under the arm-pit; but when it is backward, there appears a protuberance behind the shoulder, and the arm is thrown forwards towards the breast.

The usual method of reducing dislocations of the shoulder is to seat the patient upon a low stool, and to cause an assistant to hold his body so that it may not give way to the extension, while another lays hold of the arm a little above the elbow, and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied behind his own neck: by this, while a sufficient extension is made, he lifts up the head of the bone, and with his hand directs it into its proper place. There are various machines invented for facilitating this operation, but the hand of an expert surgeon is always more safe. In young and delicate patients, I have generally found it a very easy matter to reduce the shoulder, by extending the arm with one hand, and thrusting in the head of the bone with the other. In making the extension, the arm ought always to be a little bent.

DISLOCATION OF THE ELBOW.

The bones of the fore-arm may be dislocated in any direction. When this is the case, a protuberance may be observed on that side of the arm towards which the bone is pushed, from which, and the patient's inability to bend his arm, a dislocation of this joint may easily be known.

Two assistants are generally necessary for reducing a dislocation of the elbow; one of them must lay hold of the arm above, and the other below the joint, and make a pretty

strong extension, while the operator returns the bones into their proper place. Afterwards the arm must be bent, and suspended for some time with a sling about the neck.

Luxations of the wrist and fingers are to be reduced in the same manner as those of the elbow, viz. by making an extension in different directions, and thrusting the head of the bone into its place.

DISLOCATION OF THE THIGH.

When the thigh-bone is dislocated forward and downward, the knee and foot are turned out, and the leg is longer than the other; but when it is displaced backward, it is usually pushed upwards at the same time, by which means the limb is shortened, and the foot is turned inwards.

When the thigh-bone is displaced forward and downward, the patient, in order to have it reduced, must be laid upon his back, and made fast by bandages, or held by assistants, while by others an extension is made by means of slings fixed about the bottom of the thigh a little above the knee. While the extension is made, the operator must push the head of the bone outward, till it gets into the socket. If the dislocation be outward, the patient must be laid upon his face, and during the extension, the head of the bone must be pushed inward.

Dislocations of the *knees*, *ancles*, and *toes*, are reduced much in the same manner as those of the upper extremities, viz. by making an extension in opposite directions, while the operator replaces the bones. In many cases, however, the extension alone is sufficient, and the bone will slip into its place merely by pulling the limb with sufficient force. It is not hereby meant, that force alone is sufficient for the reduction of dislocation. Skill and address will often succeed better than force. I have known a dislocation of the thigh reduced by one man, after all the force that could be used by six had proved ineffectual.

CHAP. LII.

OF BROKEN BONES, &c.

THERE is in most country villages, some person who pretends to the art of reducing fractures. Though in general such persons are very ignorant, yet some of them are very successful; which evidently proves, that a small degree of learning, with a sufficient share of common sense and a mechanical head, will enable a man to be useful in this way. We would, however, advise people never to employ such operators, when an expert and skilful surgeon can be had; but when that is impracticable, they must be employed: we shall therefore recommend the following hints to their consideration:

When a large bone is broken, the patient's diet ought in all respects to be the same as in an inflammatory fever. He should likewise be kept quiet and cool, and his body open by emollient clysters; or if these cannot be conveniently administered, by food that is of an opening quality; as stewed prunes, apples boiled in milk, boiled spinage, and the like. It ought, however, to be here remarked, that persons who have been accustomed to live high, are not all of a sudden to be reduced to a very low diet. This might have fatal effects. There is often a necessity for indulging even bad habits, in some measure, where the nature of the disease might require a different treatment.

It will generally be necessary to bleed the patient immediately after a fracture, especially if he be young, of a full habit, or has at the same time received any bruise or contusion. This operation should not only be performed soon after the accident happens, but if the patient be very feverish, it may be repeated next day. When several of the ribs are broken, bleeding is peculiarly necessary.

If any of the large bones which support the body are broken, the patient must keep his bed for several weeks. It is by no means necessary, however, that he should lie all that time, as is customary, upon his back. This situation sinks the spirits, galls and frets the patient's skin, and renders him very uneasy. After the second week he may be gently raised up, and may sit several hours, supported by a bed-chair, or

the like, which will greatly relieve him. Great care, however, must be taken in raising him up and laying him down, that he make no exertions himself, otherwise the action of the muscles may pull the bone out of its place.*

It is of great importance to keep the patient dry and clean while in this situation. By neglecting this, he is often so galled and excoriated, that he is forced to keep shifting places for ease. I have known a fractured thigh-bone, after it had been kept straight for above a fortnight, displaced by this means, and continue bent for life, in spite of all that could be done.

It has been customary when a bone was broken, to keep the limb for five or six weeks continually upon the stretch. But this is a bad posture. It is both uneasy to the patient, and unfavourable to the cure. The best situation is to keep the joint a little bent. This is the posture into which every animal puts its limbs when it goes to rest, and in which fewest muscles are upon the stretch. It is easily effected, by either laying the patient upon his side, or making the bed so as to favour this position of the limb.

Bone-setters ought carefully to examine whether the bone be not shattered or broken into several pieces. In this case it will sometimes be necessary to have the limb immediately taken off, otherwise a gangrene or mortification may ensue. The horror which attends the very idea of an amputation, often occasions its being delayed in such cases till too late. I have known this principle operate so strongly, that a limb, where the bones were shattered into more than twenty pieces, was not amputated before the third day after the accident, when the gangrene had proceeded so far as to render the operation useless.

When a fracture is accompanied with a wound, it must be dressed in all respects as a wound.

All that art can do towards the cure of a broken bone, is

* Various pieces of machinery have been contrived for counteracting the force of the muscles, and retaining the fragments of broken bones; but as descriptions of these without drawings would be of little use, I shall refer the reader to a cheap and useful performance *On the Nature and Cure of Fractures*, lately published by my ingenious friend Mr Aitken, surgeon in Edinburgh; wherein that gentleman has not only given an account of the machines recommended in fractures by former authors, but has likewise added several improvements of his own, which are peculiarly useful in compound fractures, and in cases where patients with broken bones are obliged to be transported from one place to another.

to lay it perfectly straight, and to keep it quite easy. All tight bandages do hurt. They had much better be wanted altogether. A great many of the bad consequences which succeed to fractured bones are owing to tight bandages. This is one of the ways in which the excess of art, or rather the abuse of it, does more mischief than would be occasioned by the want of it. Some of the most sudden cures of broken bones which were ever known, happened where no bandages were applied at all. Some method, however, must be taken to keep the member steady; but this may be done many ways, without bracing it with a tight bandage.

The best method of retention is by two or more splints made of leather or pasteboard. These, if moistened before they are applied, soon assume the shape of the included member, and are sufficient, by the assistance of a very slight bandage, for all the purposes of retention. The bandage which we would recommend, is that made with twelve or eighteen tails. It is much easier applied and taken off than rollers, and answers all the purposes of retention equally well. The splints should always be as long as the limb, with holes cut for the ancles when the fracture is in the leg.

In fractures of the ribs, where a bandage cannot be properly used, an adhesive plaster may be applied over the part. The patient in this case ought to keep himself quite easy, avoiding every thing that may occasion sneezing, laughing, coughing, or the like. He ought to keep his body in a straight posture, and should take care that his stomach be constantly distended, by taking frequently some light food, and drinking freely of weak watery liquors.

The most proper external application for a fracture is *oxycrate*, or a mixture of vinegar and water. The bandages should be wet with this at every dressing.

OF STRAINS.

Strains are often attended with worse consequences than broken bones. The reason is obvious; they are generally neglected. When a bone is broken, the patient is obliged to keep the member easy, because he cannot make use of it; but when a joint is only strained, the person, finding he can still make a shift to move it, is sorry to lose his time for so trifling an ailment. In this way he deceives himself, and

converts into an incurable malady what might have been removed by only keeping the part easy for a few days.

Country people generally immerse a strained limb in cold water. This is very proper, provided it be done immediately, and not kept in too long. But the custom of keeping the part immersed in cold water for a long time is certainly dangerous. It relaxes instead of bracing the part, and is more likely to produce a disease than remove one.

Wrapping a garter, or some other bandage, pretty tight about the strained part, is likewise of use. It helps to restore the proper tone of the vessels, and prevents the action of the parts from increasing the disease. It should not, however, be applied too tight. I have frequently known bleeding near the affected part have a very good effect; but what we would recommend above all, is *ease*. It is more to be depended on than any medicine, and seldom fails to remove the complaint.*

OF RUPTURES.

Children and old people are most liable to this disease. In the former it is generally occasioned by excessive crying, coughing, vomiting, or the like. In the latter, it is commonly the effect of blows, or violent exertions of the strength, as leaping, carrying great weights, &c. In both, a relaxed habit, indolence, and an oily or very moist diet, dispose the body to this disease.

A rupture sometimes proves fatal before it is discovered. Whenever sickness, vomiting, and obstinate costiveness, give reason to suspect an obstruction of the bowels, all those places where ruptures usually happen ought carefully to be examined. The protrusion of a very small part of the gut will occasion all these symptoms; and, if not returned in due time, will prove fatal. On the first appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by

* A great many external applications are recommended for strains, some of which do good, and others hurt. The following are such as may be used with the greatest safety, viz. poultices made of stale beer or vinegar and oatmeal, camphorated spirits of wine, Mindererus's spirit, volatile liniment, volatile aromatic spirit diluted with a double quantity of water, and the common fomentation, with the addition of brandy or spirit of wine.

gentle pressure. After it is returned, a piece of sticking-plaster may be applied over the part, and a proper truss or bandage must be constantly worn for a considerable time. The method of making and applying rupture bandages for children is pretty well known. The children must, as far as possible, be kept from crying, and from all violent exertions, till the rupture is quite healed.

In adults, when the gut has been forced down with great violence, or happens from any cause to be inflamed, there is often great difficulty in returning it, and sometimes the thing is quite impracticable without an operation; a description of which is foreign to our purpose. As I have been fortunate enough, however, always to succeed in my attempts to return the gut, without having recourse to any other means than what are in the power of every man, I shall briefly mention the method which I generally pursue.

After the patient has been bled, he must be laid upon his back, with his head very low, and his breech raised high with pillows. In this situation flannel cloths wrung out of a decoction of mallows and camomile-flowers, or, if these are not at hand, of warm water, must be applied for a considerable time. A clyster made of this decoction, with a large spoonful of butter and an ounce or two of salt, may be afterwards thrown up. If these should not prove successful, recourse must be had to pressure. If the tumour be very hard, considerable force will be necessary; but it is not force alone which succeeds here. The operator, at the same time that he makes a pressure with the palms of his hands, must with his finger artfully conduct the gut in by the same aperture through which it came out. The manner of doing this can be much easier conceived than described. Should these endeavours prove ineffectual, clysters of the smoke of tobacco may be tried. These have been often known to succeed where every other method failed.

These is reason to believe that, by persisting in the use of these, and such other means as the circumstances of the case may suggest, most *hernias* might be reduced without an operation. Cutting for the *hernia* is a nice and difficult matter. I would therefore advise surgeons to try every method of returning the gut before they have recourse to the knife. I have once and again succeeded by persevering in

my endeavours, after eminent surgeons had declared the reduction of the gut impracticable without an operation.*

An adult, after the gut has been returned, must wear a steel bandage. It is needless to describe this, as it may always be had ready made from the artists. Such bandages are generally uneasy to the wearer for some time, but by custom they become quite easy. No person who has had a rupture after he arrived at man's estate, should ever be without one of these bandages.

Persons who have a rupture ought carefully to avoid all violent exercise, carrying great weights, leaping, running, and the like. They should likewise avoid windy aliment and strong liquors; and should carefully guard against catching cold.

CHAP. LIII.

OF CASUALTIES.

It is certain that life, when to all appearance lost, may often by due care be restored. Accidents frequently prove fatal, merely because proper means are not used to counteract their effects. No person ought to be looked upon as killed by any accident, unless where the structure of the heart, brain, or some organ necessary to life, is evidently destroyed. The action of these organs may be so far impaired, as even to be for some time imperceptible, when life is by no means gone. In this case, however, if the fluids be suffered to grow cold, it will be impossible to put them again in motion, even though the solids should recover their power of acting. Thus, when the motion of the lungs has been stopped by unwholesome vapour, the action of the heart by a stroke on the breast, or the functions of the brain by a blow on the head, if the person be suffered to grow cold, he will in all probability continue so: but if the body be kept warm, as soon as the injured part has recovered its

* I would here beg leave to recommend it to every practitioner, when his patient complains of pain in the belly with obstinate costiveness, to examine the groins and every place where a rupture may happen, in order that it may be immediately reduced. By neglecting this, many perish who were not suspected to have had ruptures till after they were dead. I have known this happen where half a dozen of the faculty were in attendance.

power of acting, the fluids will again begin to move, and all the vital functions will be restored.

It is a horrid custom, immediately to consign over to death every person who has the misfortune, by a fall, a blow, or the like, to be deprived of the appearance of life. The unhappy person, instead of being carried into a warm house, and laid by the fire or put to a warm bed, is generally hurried away to a church, or a barn, or some other cold damp house, where, after a fruitless attempt has been made to bleed him, perhaps by one who knew nothing of the matter, he is given over for dead, and no farther notice taken of him. This conduct seems to be the result of ignorance, supported by an ancient superstitious notion, which forbids the body of any person killed by accident to be laid in a house that is inhabited. What the ground of this superstition may be, we shall not pretend to inquire: but surely the conduct founded upon it is contrary to all the principles of reason, humanity, and common sense.

When a person seems to be suddenly deprived of life, our first business is to inquire into the cause. We ought carefully to observe whether any substance be lodged in the windpipe or gullet; and, if that is the case, attempts must be made to remove it. When unwholesome air is the cause, the patient ought immediately to be removed out of it. If the circulation be suddenly stopped, from any cause whatever, except mere weakness, the patient should be bled. If the blood does not flow, he may be immersed in warm water, or rubbed with warm cloths, &c. to promote the circulation. When the cause cannot be suddenly removed, our great aim must be to keep up the vital warmth, by rubbing the patient with hot cloths, or salt, and covering his body with warm sand, ashes, or the like.

I should now proceed to treat more fully of those accidents, which, without immediate assistance, would often prove fatal, and to point out the most likely means for relieving the unhappy sufferers; but as I have been happily anticipated in this part of my subject by the learned and humane Dr Tissot, I shall content myself with collecting such of his observations as seem to be the most important, and adding such of my own as have occurred in the course of practice.

OF SUBSTANCES STOPT BETWEEN THE MOUTH AND STOMACH.

Though accidents of this kind are very common and extremely dangerous, yet they are generally the effect of carelessness. Children should be taught to chew their food well, and to put nothing into their mouths which it would be dangerous for them to swallow. But children are not the only persons guilty of this piece of imprudence. I know many adults who put pins, nails, and other sharp-pointed substances in their mouths upon every occasion, and some who even sleep with the former there all night. This conduct is exceedingly injudicious, as a fit of coughing, or twenty other accidents, may force over the substance before the person is aware.*

When any substance is detained in the gullet, there are two ways of removing it, viz. either by extracting it, or pushing it down. The safest and most certain way is to extract it; but this is not always the easiest; it may therefore be more eligible sometimes to thrust it down, especially when the obstructing body is of such a nature, that there is no danger from its reception into the stomach. The substances which may be pushed down without danger are, all common nourishing ones, as bread, flesh, fruits, and the like. All indigestible bodies, as cork, wood, bones, pieces of metal, and such like, ought, if possible, to be extracted, especially if these bodies be sharp-pointed, as pins, needles, fish-bones, bits of glass, &c.

When such substances have not passed in too deep, we should endeavour to extract them with our fingers; which method often succeeds. When they are lower, we must make use of nippers, or a small pair of forceps, such as surgeons use. But this attempt to extract rarely succeeds if the substance be of a flexible nature, and has descended far into the gullet.

If the fingers and pincers fail, or cannot be duly applied, crotchets, a kind of hooks, must be employed. These may be made at once, by bending a piece of pretty strong iron

* A woman in one of the hospitals of this city lately discharged a number of pins, which she had swallowed in the course of her business, through an ulcer in her side.

wire at one end. It must be introduced in the flat way; and, for the better conducting it, there should likewise be a curve or bending at the end it is held by, to serve as a kind of handle to it; which has this farther use, that it may be secured by a string tied to it; a circumstance not to be omitted in any instrument employed on such occasions, to avoid such ill accidents as have sometimes ensued from these instruments slipping out of the operator's hand. After the crotchet has passed below the substance that obstructs the passage, it is drawn up again, and hooks up the body along with it. The crotchet is also very convenient, when a substance somewhat flexible, as a pin or fish-bone, sticks across the gullet, the hook, in such cases, seizing them about their middle part, crooks and thus disengages them; or, if they are very brittle substances, serves to break them.

When the obstructing bodies are small, and only stop up a part of the passage, and which may either easily elude the hook, or straiten it by their resistance, a kind of rings, made either of wire, wool, or silk, may be used. A piece of fine wire of a proper length may be bent into a circle, about the middle, of about an inch diameter, and the long unbent sides brought parallel, and near each other: these are to be held in the hand, and the circular part or ring introduced into the gullet, in order to be conducted about the obstructing body, and so to extract it. More flexible rings may be made of wool, thread, silk, or small pack-thread, which may be waxed for their greater strength and consistence. One of these is to be tied fast to a handle of iron wire, whalebone, or any kind of flexible wood, and by this means introduced, in order to surround the obstructing substance, and to draw it out. Several of these rings passed through one another may be used, the more certainly to lay hold of the obstructing body, which may be involved by one, if another should miss it. These rings have one advantage, which is, that when the substance to be extracted is once laid hold of, it may then, by turning the handle, be retained so strongly in the ring thus twisted, as to be moved every way, which must in many cases be a considerable advantage.

Another material employed on these unhappy occasions is the sponge. Its property of swelling considerably on being wet is the principal foundation of its usefulness here. If any substance is stopped in the gullet, but without filling

up the whole passage, a bit of sponge may be introduced into that part which is unstopped, and beyond the substance. The sponge soon dilates, and grows larger in this moist situation; and indeed the enlargement of it may be forwarded by making the patient swallow a few drops of water. Afterwards it is to be drawn back by the handle to which it is fastened; and as it is now too large to return through the small cavity by which it was conveyed in, it draws out the obstructing body along with it.

The compressibility of sponge is another foundation of its usefulness in such cases. A pretty large piece of sponge may be compressed or squeezed into a small size, by winding a string of tape closely about it, which may be easily unwound and withdrawn, after the sponge has been introduced. A bit of sponge may likewise be compressed by a piece of whalebone split at one end; but this can hardly be introduced in such a manner as not to hurt the patient.

I have often known pins and other sharp bodies, which had stuck in the throat, brought up by causing the person to swallow a bit of tough meat tied to a thread, and drawing it quickly up again. This is safer than swallowing sponge, and will often answer the purpose equally well.

When all these methods prove unsuccessful, there remains one more, which is, to make the patient vomit; but this can scarcely be of any service, unless when such obstructing bodies are simply engaged in, and not hooked or stuck into the sides of the gullet, as in this case vomiting might sometimes occasion farther mischief. If the patient can swallow, vomiting may be excited by taking half a dram or two scruples of ipecacuanha in powder made into a draught. If he is not able to swallow, an attempt may be made to excite vomiting, by tickling his throat with a feather; and, if that should not succeed, a clyster of tobacco may be administered. It is made by boiling an ounce of tobacco in a sufficient quantity of water. This has often been found to succeed when other attempts to excite vomiting had failed.

When the obstructing body is of such a nature that it may with safety be pushed downwards, this may be attempted by means of a wax candle oiled, and a little heated, so as to make it flexible; or a piece of whalebone, wire, or flexible wood, with a sponge fastened to one end.

Should it be impossible to extract even those bodies which

it is dangerous to admit into the stomach, we must then prefer the least of two evils, and rather run the hazard of pushing them down, than suffer the patient to perish in a few minutes; and we ought to scruple this resolution the less, as a great many instances have happened, where the swallowing of such hurtful and indigestible substances have been followed by no disorder.

Whenever it is manifest that all endeavours either to extract or push down the substance must prove ineffectual, they should be discontinued; because the inflammation occasioned by persisting in them, might be as dangerous as the obstruction itself. Some have died in consequence of the inflammation, even after the body which caused the obstruction had been entirely removed.

While the means recommended above are making use of, the patient should often swallow, or, if he cannot, he should frequently receive by injection, through a crooked tube or pipe that may reach down to the gullet, some emollient liquor, as warm milk and water, barley water, or a decoction of mallows. Injections of this kind not only soften and soothe the irritated parts, but when thrown in with force, are often more successful in loosening the obstruction, than all attempts with instruments.

When, after all our endeavours, we are obliged to leave the obstructing body in the part, the patient must be treated as if he had an inflammatory disease. He should be bled, kept upon a low diet, and have his whole neck surrounded with emollient poultices. The like treatment must also be used, if there be any reason to suspect an inflammation of the passages, though the obstructing body be removed.

A proper degree of agitation has sometimes loosened the inherent body more effectually than instruments. Thus a blow on the back has often forced up a substance which stuck in the gullet; but this is still more proper and efficacious when the substance gets into the wind-pipe. In this case, vomiting and sneezing are likewise to be excited. Pins, which stuck in the gullet, have been frequently discharged by riding on horseback, or in a carriage.

When any indigestible substance has been forced down into the stomach, the patient should use a very mild and smooth diet, consisting chiefly of fruits and farinaceous sub-

stances, as puddings, pottage, and soups. He should avoid all heating and irritating things, as wine, punch, pepper, and such like; and his drink should be milk and water, barley-water, or whey.

When the gullet is so strongly and fully closed, that the patient can receive no food by the mouth, he must be nourished by clysters of soup, jelly, and the like.

When the patient is in danger of being immediately suffocated, and all hopes of freeing the passage is vanished, so that death seems at hand, if respiration be not restored; the operation of *bronchotomy*, or opening of the windpipe, must be directly performed. As this operation is neither difficult to an expert surgeon, nor very painful to the patient, and is often the only method which can be taken to preserve life in these emergencies, we thought proper to mention it, though it should only be attempted by persons skilled in surgery.

OF DROWNED PERSONS.

When a person has remained above a quarter of an hour under water, there can be no considerable hopes of his recovery. But as several circumstances may happen to have continued life, in such an unfortunate situation, beyond the ordinary term, we should never too soon resign the unhappy object to his fate, but try every method for his relief, as there are many well-attested proofs of the recovery of persons to life and health who had been taken out of the water apparently dead, and who remained a considerable time without exhibiting any signs of life.

The first thing to be done, after the body is taken out of the water, is to convey it as soon as possible to some convenient place where the necessary operations for its recovery may be performed. In doing this, care must be taken not to bruise or injure the body by carrying it in any unnatural posture, with the head downwards, or the like. If an adult body, it ought to be laid on a bed, or on straw, with the head a little raised, and carried on a cart or on men's shoulders, and kept in as natural and easy a position as possible. A small body may be carried in the arms.

In attempting to recover persons apparently drowned, the principal intention to be pursued is, *to restore the natural*

warmth, upon which all the vital functions depend; and to excite these functions by the application of stimulants, not only to the skin, but likewise to the lungs, intestines, &c.

Though cold was by no means the cause of the person's death, yet it will prove an effectual obstacle to his recovery. For this reason, after stripping him of his wet clothes, his body must be strongly rubbed for a considerable time with coarse linen cloths, as warm as they can be made; and, as soon as a well-heated bed can be got ready, he may be laid in it, and the rubbing should be continued. Warm cloths ought likewise to be frequently applied to the stomach and bowels, and hot bricks, or bottles of warm water, to the soles of his feet, and to the palms of his hands.

Strong volatile spirits should be frequently applied to the nose; and the spine of the back and pit of the stomach may be rubbed with warm brandy or spirit of wine. The temples ought also to be chafed with volatile spirits; and stimulating powders, as that of tobacco or marjoram, may be blown up the nostrils.

To renew the breathing, a strong person may blow his own breath into the patient's mouth, with all the force he can, holding his nostrils at the same time. When it can be perceived by the rising of the chest or belly that the lungs are filled with air, the person ought to desist from blowing, and should press the breast and belly so as to expel the air again; and this operation may be repeated for some time, alternately inflating and depressing the lungs so as to imitate natural respiration.

If the lungs cannot be inflated in this manner, it may be attempted by blowing through one of the nostrils, and at the same time keeping the other close. Dr Monro, for this purpose, recommends a wooden pipe fitted at one end for filling the nostril, and at the other for being blown into by a person's mouth, or for receiving the pipe of a pair of bellows, to be employed for the same purpose, if necessary.

When air cannot be forced into the chest by the mouth or nose, it may be necessary to make an opening into the windpipe for this purpose. It is needless, however, to spend time in describing this operation, as it should not be attempted unless by persons skilled in surgery.

To stimulate the intestines, the fume of tobacco may be thrown up in form of a clyster. There are various pieces

of apparatus contrived for this purpose, which may be used when at hand; but where these cannot be obtained, the business may be done by a common tobacco-pipe. The bowel of the pipe must be filled with tobacco well kindled, and, after the small tube has been introduced into the fundament, the smoke may be forced up by blowing through a piece of paper full of holes, wrapped round the mouth of the pipe, or by blowing through an empty pipe the mouth of which is applied close to that of the other. This may also be done in the following manner: A common clyster-pipe, with a bag mounted upon it, may be introduced into the fundament, and the mouth of the bag may be applied round the small end of a tobacco-pipe, in the bowl of which tobacco is to be kindled, and the smoke blown up as directed above. Should it be found impracticable to throw up the smoke of tobacco, clysters of warm water, with the addition of a little salt, and some wine or spirits, may be frequently administered. This may be done by a common clyster-bag and pipe; but, as it ought to be thrown well up, a pretty large syringe will answer the purpose better.

While these things are doing, some of the attendants ought to be preparing a warm bath, into which the person should be put, if the above endeavours prove ineffectual. Where there are no conveniences for using the warm bath, the body may be covered with warm salt, sand, ashes, grains, or such like. Tissot mentions an instance of a girl who was restored to life, after she had been taken out of the water, swelled, bloated, and to all appearance dead, by laying her naked body upon hot ashes, covering her with others equally hot, putting a bonnet round her head, and a stocking round her neck stuffed with the same, and heaping coverings over all. After she had remained half an hour in this situation, her pulse returned, she recovered speech, and cried out, *I freeze, I freeze;* a little cherry brandy was given her, and she remained buried, as it were, under the ashes for eight hours: afterwards she was taken out, without any other complaint, except that of lassitude or weariness, which went off in a few days. The Doctor mentions likewise an instance of a man who was restored to life, after he had remained six hours under water, by the heat of a dunghill.

Till the patient shews some signs of life, and is able to swallow, it would be useless and even dangerous to pour li-

quors into his mouth. His lips, however, and tongue, may be frequently wet with a feather dipped in warm brandy or other strong spirits; and, as soon as he has recovered the power of swallowing, a little warm wine, or some other cordial, ought every now and then to be administered.

Some recommend a vomit after the patient is a little re-animated; but if he can be made to puke without a sickening draught, it will be more safe: this may generally be done by tickling the throat and fauces with an oiled feather, or some other soft substance, which will not injure the parts. Tissot, in this case, recommends the oxymel of squills, a table-spoonful of which, diluted with water, may be given every quarter of an hour, till the patient has taken five or six doses. Where that medicine is not at hand, a strong infusion of sage, camomile flowers, or *carduus benedictus*, sweetened with honey, or some warm water, with the addition of a little salt, may, he says, supply its place. The Doctor does not intend that any of these things should be given in such quantity as to occasion vomiting. He thinks emetics in this situation are not expedient.

We are by no means to discontinue our assistance as soon as the patients discover some tokens of life, since they sometimes expire after these first appearances of recovering. The warm and stimulating applications are still to be continued, and small quantities of some cordial liquor ought frequently to be administered. Lastly, though the person should be manifestly re-animated, there sometimes remain an oppression, a cough, and feverishness, which effectually constitute a disease. In this case it will be necessary to bleed the patient in the arm, and to cause him to drink plentifully of barley-water, elder-flower tea, or any other soft pectoral infusion.

Such persons as have the misfortune to be deprived of the appearances of life, by a fall, a blow, suffocation, or the like, must be treated nearly in the same manner as those who have been for some time under water. I once attended a patient who was so stunned by a fall from a horse, that for above six hours he scarcely exhibited any signs of life; yet this man, by being bled, and proper methods taken to keep up the vital warmth, recovered, and in a few days was perfectly well. Dr Alexander gives an instance to the same purpose, in the Edinburgh Physical and Literary Essays,

of a man who was to all appearance killed by a blow on the breast, but recovered upon being immersed for some time in warm water. These, and other instances of a similar nature, which might be adduced, amount to a full proof of this fact, that many of those unhappy persons who lose their lives by falls, blows, and other accidents, might be saved *by the use of proper means duly persisted in.*

OF NOXIOUS VAPOURS.

Air may be many ways rendered noxious, or even destructive to animals. This may either happen from its vivifying principle being destroyed, or from subtle exhalations with which it is impregnated. Thus air that has passed through burning fuel is neither capable of supporting fire, nor the life of animals. Hence the danger of sleeping in close chambers with coal fires. Some indeed suppose the danger here proceeds from the sulphureous oil contained in the coal, which is set at liberty and diffused all over the chamber; while others imagine it is owing to the air of the room being charged with phlogiston. Be this as it may, it is a situation carefully to be avoided. Indeed, it is dangerous to sleep in a small apartment with a fire of any kind. I lately saw four persons who had been suffocated by sleeping in an apartment where a small fire of coal had been left burning.

The vapour which exhales from wine, cyder, beer, or other liquors, in the state of fermentation, contains something poisonous, which kills in the same manner as the vapour of coal. Hence there is always danger in going into cellars where a large quantity of these liquors is in a state of fermentation, especially if they have been close shut up for some time. There have been many instances of persons struck dead on entering such places, and of others who have with difficulty escaped.

When subterraneous caves, that have been very long shut, are opened, or when deep wells are cleaned, which have not been emptied for several years, the vapours arising from them produce the same effects as those mentioned above. For this reason, no person ought to venture into a well, pit, cellar, or any place that is damp, and has been long shut up, till the air has been sufficiently purified, by burning gun-powder in it. It is easy to know, as has been observed

in a former part of this work, when the air of such places is unwholesome, by letting down a lighted candle, throwing in burning fuel, or the like. If these continue to burn, people may safely venture in; but where they are suddenly extinguished, no one ought to enter till the air has been first purified by fire.

The offensive smell of lamps and of candles, especially when their flames are extinguished, operate like other vapours, though with less violence, and less suddenly. There have, however, been instances of people killed by the fumes of lamps which had been extinguished in a close chamber; and persons of weak, delicate breasts, generally find themselves quickly oppressed in apartments illuminated with many candles.

Such as are sensible of their danger in these situations, and retreat seasonably from it, are generally relieved as soon as they get into the open air; or, if they have any remaining uneasiness, a little water and vinegar, or lemonade, drank hot, affords them relief. But when they are so far poisoned as to have lost their feeling and understanding, the following means must be used for their recovery:

The patient should be exposed to a very pure, fresh, and open air; and volatile salts, or other stimulating substances, held to his nose. He should next be bled in the arm, or if that does not succeed, in the neck. His legs ought to be put into warm water, and well rubbed. As soon as he can swallow, some lemonade, or water and vinegar, with the addition of a little nitre, may be given him.

Nor are sharp clysters by any means to be neglected; these may be made, by adding to the common clyster, syrup of buckthorn and tincture of senna, of each two ounces; or, in their stead, half an ounce of Venice turpentine dissolved in the yolk of an egg. Should these things not be at hand, two or three large spoonfuls of common salt may be put into the clyster. The same means, if necessary, which were recommended in the former part of this chapter, may be used to restore the circulation, warmth, &c.

Mr Tossach, surgeon at Alloa, relates the case of a man suffocated by the steam of burning coal, whom he recovered by blowing his breath into the patient's mouth, bleeding him in the arm, and causing him to be well rubbed and tossed about. And Dr Frewen, of Sussex, mentions the case

of a young man who was stupified by the smoke of sea-coal, but was recovered by being plunged into cold water, and afterwards laid in a warm bed.

The practice of plunging persons suffocated by noxious vapours in cold water, would seem to be supported by the common experiment of suffocating dogs in the *grotto del sani*, and afterwards recovering them by throwing them into the neighbouring lake.

EFFECTS OF EXTREME COLD.

When cold is extremely severe, and a person is exposed to it for a long time, it proves mortal, in consequence of its stopping the circulation in the extremities, and forcing too great a proportion of blood towards the brain; so that the patient dies of a kind of apoplexy, preceded by great sleepiness. The traveller, in this situation, who finds himself begin to grow drowsy, should redouble his efforts to extricate himself from the imminent danger he is exposed to. This sleep, which he might consider as some alleviation of his sufferings, would, if indulged, prove his last.

Such violent effects of cold are happily not very common in this country; it frequently happens, however, that the hands or feet of travellers are so benumbed or frozen, as to be in danger of a mortification, if proper means are not used to prevent it. The chief danger in this situation arises from the sudden application of heat. It is very common, when the hands or feet are pinched with cold, to hold them to the fire; yet reason and observation shew that this is a most dangerous and imprudent practice.

Every peasant knows, if frozen meat, fruits, or roots of any kind, be brought near the fire, or put into warm water, they will be destroyed by rottenness, or a kind of mortification; and that the only way to recover them, is to immerse them for some time in very cold water. The same observation holds with regard to animals in this condition.

When the hands or feet are greatly benumbed with cold, they ought either to be immersed in cold water, or rubbed with snow, till they recover their natural warmth and sensibility; after which, the person may be removed into an apartment a little warmer, and may drink some cups of tea, or an infusion of elder-flowers sweetened with honey.

Every person, must have observed, when his hands were even but slightly affected with cold, that the best way to warm them was by washing them in cold water, and continuing to rub them well for some time.

When a person has been so long exposed to the cold, that all appearances of life are gone, it will be necessary to rub him all over with snow or cold water; or, what will answer better, if it can be obtained, to immerse him in a bath of the very coldest water. There is the greatest encouragement to persist in the use of these means, as we are assured that persons who had remained in the snow, or had been exposed to the freezing air during five or six successive days, and who had discovered no marks of life for several hours, have nevertheless been revived.

I have always thought, that the whitloes, kibes, chilblains, and other inflammations of the extremities, which are so common among the peasants in the cold season, were chiefly occasioned by their sudden transition from cold to heat. After they have been exposed to an extreme degree of cold, they immediately apply their hands and feet to the fire, or, if they have occasion, plunge them into warm water, by which means, if a mortification does not happen, an inflammation seldom fails to ensue. Most of the ill consequences from this quarter might be easily avoided, by only observing the precautions mentioned above.

EFFECTS OF EXTREME HEAT.

The effects of extreme heat, though not so common in this country, are no less fatal, and much more sudden than those of cold. In hot countries, people frequently drop down dead in the streets, exhausted with heat and fatigue. In this case, if any warm cordial can be poured into the mouth, it ought to be done. If this cannot be effected, they may be thrown up in form of a clyster. Volatile spirits, and other things of a stimulating nature, may be applied to the skin, which should be well rubbed with coarse cloths, whipped with nettles, or other stimulating things. Some of the ancient physicians are said to have restored to life persons apparently dead, by beating them with rods.

Headaches are often occasioned by exposure to intense heat; and in warm climates, where people are very liable to

what they call *coups de soleil*, or strokes of the sun, it is a common custom to lay linen cloths, several times doubled, on the head, and to keep them moistened with very cold water for half an hour, or till the stupor is diminished. This they term *drawing the fire out of the head.*

CHAP. LIV.

OF FAINTING FITS, AND OTHER CASES WHICH REQUIRE IMMEDIATE ASSISTANCE.

Strong and healthy persons, who abound with blood, are often seized with sudden fainting fits, after violent exercise, drinking freely of warm or strong liquors, exposure to great heat, intense application to study, or the like.

In such cases the patient should be made to smell to some vinegar. His temples, forehead, and wrists, ought at the same time to be bathed with vinegar mixed with an equal quantity of warm water; and two or three spoonfuls of vinegar, with four or five times as much water, may, if he can swallow, be poured into his mouth.

If the fainting proves obstinate, or degenerates into a *syncope*, that is, an abolition of feeling and understanding, the patient must be bled. After the bleeding, a clyster will be proper, and then he should be kept easy and quiet, only giving him every half hour a cup or two of an infusion of any mild vegetable, with the addition of a little sugar and vinegar.

When swoonings, which arise from this cause, occur frequently in the same person, he should, in order to escape them, confine himself to a light diet, consisting chiefly of bread, fruits, and other vegetables. His drink ought to be water or small beer, and he should sleep but moderately, and take much exercise.

But fainting fits proceed much oftener from a defect than an excess of blood. Hence they are very ready to happen after great evacuations of any kind, obstinate watching, want of appetite, or such like. In these an almost directly opposite course to that mentioned above must be pursued.

The patient should be laid in bed with his head low, and being covered, should have his legs, thighs, arms, and his

whole body, rubbed strongly with hot flannels. Hungary-water, volatile salts, or strong smelling herbs, as rue, mint, or rosemary, may be held to his nose. His mouth may be wet with a little rum or brandy; and if he can swallow, some hot wine, mixed with sugar and cinnamon, which is an excellent cordial, may be poured into his mouth. A compress of flannel dipt in hot wine or brandy must be applied to the pit of his stomach, and warm bricks, or bottles filled with hot water, laid to his feet.

As soon as the patient is recovered a little, he should take some strong soup or broth, or a little bread or biscuit soaked in hot spiced wine. To prevent the return of the fits, he ought to take often, but in small quantities, some light yet strengthening nourishment, as panado made with soup instead of water, new-laid eggs lightly poached, chocolate, light roast meats, jellies, and such like.

Those fainting fits, which are the effect of bleeding, or of the violent operation of purges, belong to this class. Such as happen after artificial bleeding are seldom dangerous, generally terminating as soon as the patient is laid upon the bed; indeed, persons subject to this kind, should always be bled lying, in order to prevent it. Should the fainting, however, continue longer than usual, volatile spirits may be held to the nose, and rubbed on the temples, &c.

When fainting is the effect of too strong or acrid purges or vomits, the patient must be treated in all respects as if he had taken poison. He should be made to drink plentifully of milk, warm water, and oil, barley-water, or such like; emollient clysters will likewise be proper, and the patient's strength should afterwards be recruited, by giving him generous cordials, and anodyne medicines.

Faintings are often occasioned by indigestion. This may either proceed from the quantity or quality of the food. When the former of these is the cause, the cure will be best performed by vomiting, which may be promoted by causing the patient to drink a weak infusion of camomile-flowers, *carduus benedictus*, or the like. When the disorder proceeds from the nature of the food, the patient, as in the case of weakness, must be revived by strong smells, &c.; after which he should be made to swallow a large quantity of light warm fluid, which may serve to drown as it were the offending matter, to soften its acrimony, and either to effect

a discharge of it by vomiting, or force it down into the intestines.

Even disagreeable smells will sometimes occasion swoonings, especially in people of weak nerves. When this happens, the patient should be carried into the open air, have stimulating things held to his nose, and those substances which are disagreeable to him ought immediately to be removed. But we have already taken notice of swoonings which arise from nervous disorders, and shall therefore say no more upon that head.

Fainting fits often happen in the progress of diseases. In the beginning of putrid diseases, they generally denote an oppression of the stomach, or a mass of corrupted humours, and they cease after evacuations either by vomit or stool. When they occur at the beginning of malignant fevers, they indicate great danger. In each of these cases, vinegar used both externally and internally is the best remedy during the paroxysm, and plenty of lemon-juice and water after it. Swoonings which happen in diseases accompanied with great evacuations, must be treated like those which are owing to weakness, and the evacuations ought to be restrained. When they happen towards the end of a violent fit of an intermitting fever, or at that of each exacerbation of a continual fever, the patient must be supported by small draughts of wine and water.

Delicate and hysteric women are very liable to swooning or fainting fits after delivery. These might be often prevented by generous cordials, and the admission of fresh air. When they are occasioned by excessive flooding, it ought by all means to be restrained. They are generally the effect of mere weakness or exhaustion. Dr Engleman relates the case of a woman 'in childbed, who after being happily delivered, suddenly fainted, and lay upwards of a quarter of an hour apparently dead. A physician was sent for; her own maid, in the meanwhile, being out of patience at his delay, attempted to assist her herself, and extending herself upon her mistress, applied her mouth to her's, blew in as much breath as she possibly could, and in a very short time the exhausted woman awaked as out of a profound sleep; when proper things being given her, she soon recovered.

'The maid being asked how she came to think of this

expedient, said, she had seen it practised at Altenburgh, by midwives upon children, with the happiest effect.'

We mention this case chiefly that other midwives may be induced to follow so laudable an example. Many children are born without any signs of life, and others expire soon after the birth, who might, without all doubt, by proper care, be restored to life.

From whatever cause fainting fits proceed, fresh air is always of the greatest importance to the patient. By not attending to this circumstance, people often kill their friends while they are endeavouring to save them. Alarmed at the patient's situation, they call in a crowd of people to his assistance, or perhaps to witness his exit, whose breathing exhausts the air and increases the danger. There is not the least doubt but this practice, which is very common among the lower sort of people, often proves fatal, especially to the delicate, and such persons as fall into fainting fits from mere exhaustion, or the violence of some disease. No more persons ought ever to be admitted into the room where a patient lies in a swoon, than are absolutely necessary for his assistance, and the windows of the apartment should always be opened, at least as far as to admit a stream of fresh air.

Persons subject to frequent swoonings or fainting fits, should neglect no means to remove the cause of them, as their consequences are always injurious to the constitution. Every fainting fit leaves the person in dejection and weakness; the secretions are thereby suspended, the humours disposed to stagnation, coagulations and obstructions are formed, and, if the motion of the blood be totally intercepted, or very considerably checked, *polypuses* are sometimes formed in the heart or larger vessels. The only kind of swoonings not to be dreaded, are those which sometimes mark the *crisis* in fevers; yet even these ought, as soon as possible, to be removed.

OF INTOXICATION.

The effects of intoxication are often fatal. No kind of poison kills more certainly than an overdose of ardent spirits. Sometimes, by destroying the nervous energy, they put an end to life at once; but in general their effects are

more slow, and in many respects similar to those of opium. Other kinds of intoxicating liquors may prove fatal when taken to excess, as well as ardent spirits; but they may generally be discharged by vomiting, which ought always to be excited when the stomach is overcharged with liquor.

More of those unhappy persons, who die intoxicated, lose their lives from an inability to conduct themselves, than from the destructive quality of the liquor. Unable to walk, they tumble down, and lie in some awkward posture, which obstructs the circulation or breathing, and often continue in this situation till they die. No person, when drunk, should be left by himself, till his clothes have been loosened, and his body laid in such a posture as is most favourable for continuing the vital motions, discharging the contents of the stomach, &c. The best posture for discharging the contents of the stomach is to lay the person upon his belly; when asleep he may be laid on his side, with his head a little raised, and particular care must be taken that his neck be no way bent, twisted, or have any thing too tight about it.

The excessive degree of thirst occasioned by drinking strong liquors, often induces people to quench it by taking what is hurtful. I have known fatal consequences even from drinking freely of milk after a debauch of wine or sour punch; these acid liquors, together with the heat of the stomach, having coagulated the milk in such a manner that it could never be digested. The safest drink after a debauch is water with a toast, tea, infusions of balm, sage, barley-water, and such like. If the person wants to vomit, he may drink a weak infusion of camomile-flowers, or lukewarm water and oil; but in this condition, vomiting may generally be excited by only tickling the throat with the finger or a feather.

Instead of giving a detail of all the different symptoms of intoxication which indicate danger, and proposing a general plan of treatment for persons in this situation, I shall briefly relate the history of a case which lately fell under my own observation, wherein most of those symptoms usually reckoned dangerous concurred, and where the treatment was successful.

A young man, about fifteen years of age, had, for a hire, drank ten glasses of strong brandy. He soon after fell fast asleep, and continued in that situation for several hours, till

at length his uneasy manner of breathing, the coldness of the extremities, and other threatening symptoms, alarmed his friends, and made them send for me. I found him still sleeping, his countenance ghastly, and his skin covered with a cold clammy sweat. Almost the only signs of life remaining were, a deep laborious breathing, and a convulsive motion or agitation of his bowels.

I tried to rouse him, but in vain, by pinching, shaking, applying volatile spirits, and other stimulating things to his nose, &c. A few ounces of blood were likewise taken from his arm, and a mixture of vinegar and water was poured into his mouth; but as he could not swallow, very little of this got into the stomach. None of these things having the least effect, and the danger seeming to increase, I ordered his legs to be put into warm water, and a sharp clyster to be immediately administered. This gave him a stool, and was the first thing that relieved him. It was afterwards repeated with the same happy effect, and seemed to be the chief cause of his recovery. He then began to show some signs of life, took drink when it was offered him, and came gradually to his senses. He continued, however, for several days weak and feverish, and complained much of a soreness in his bowels, which gradually went off, by means of a slender diet, and cool mucilaginous liquors.

This young man would probably have been suffered to die, without any assistance being called, had not a neighbour, a few days before, who had been advised to drink a bottle of spirits to cure him of an ague, expired under very similar circumstances.

OF SUFFOCATION AND STRANGLING.

These may sometimes proceed from an infraction of the lungs, produced by viscid clammy humours, or a spasmodic affection of the nerves of that organ. Persons who feed grossly, and abound in rich blood, are very liable to suffocating fits from the former of these causes. Such ought, as soon as they are attacked, to be bled, to receive an emollient clyster, and to take frequently a cup of diluting liquor with a little nitre in it. They should likewise receive the steams of hot vinegar into their lungs by breathing.

Nervous and asthmatic persons are most subject to spas-

modic affections of the lungs. In this case the patient's legs should be immersed in warm water, and the steams of vinegar applied as above. Warm diluting liquors should likewise be drunk; to a cup of which a tea-spoonful of the paregoric elixir may occasionally be added. Burnt paper, feathers, or leather, may be held to the patient's nose, and fresh air should be freely admitted to him.

Infants are often suffocated by the carelessness or inattention of their nurses.* An infant, when in bed, should always be laid so that it cannot tumble down with its head under the bed-clothes; and when in a cradle, its face ought never to be covered. A small degree of attention to these two simple rules would save the lives of many infants, and prevent others from being rendered weak and sickly all their days by the injuries done to their lungs.

Instead of laying down a plan for the recovery of infants who are suffocated, or overlaid, as it is termed by their nurses, I shall give the history of a case related by Monsieur Janin, of the Royal College of Surgery at Paris, as it was attended with success, and contains almost every thing that can be done on such occasions.

A nurse having had the misfortune to overlay a child, he was called in, and found the infant without any signs of life; no pulsation in the arteries, no respiration, the face livid, the eyes open, dull, and tarnished, the nose full of snivel, the mouth gaping, in short it was almost cold. Whilst some linen cloths and a parcel of ashes were warming, he had the boy unswathed, and laid him in a warm bed, and on the right side. He then was rubbed all over with fine linen, for fear of fretting his tender and delicate skin. As soon as the ashes had received their due degree of heat, Mr Janin buried him in them, except the face, placed him on the side opposite to that on which he had been at first laid, and covered him with a blanket. He had a bottle of *eau de luce* in his pocket, which he presented to his nose from time to time; and between whiles some puffs of tobacco were blown up his nostrils; to these succeeded the blowing

* These accidents are not always the effects of carelessness. I have known an infant overlaid by its mother being seized in the night with an hysteric fit. This ought to serve as a caution against employing hysteric women as nurses; and should likewise teach such women never to lay an infant in the same bed with themselves, but in a small adjacent one.

into his mouth, and squeezing tight his nose. Animal heat began thus to be excited gradually; the pulsations of the temporal arteries were soon felt, the breathing became more frequent and free, and the eyes closed and opened alternately. At length the child fetched some cries expressive of his want of the breast, which being applied to his mouth, he catched it with avidity, and sucked as if nothing had happened to him. Though the pulsations of the arteries were by this time very well re-established, and it was hot weather, yet Mr Janin thought it advisable to leave his little patient three quarters of an hour longer under the ashes. He was afterwards taken out, cleaned and dressed as usual; to which a gentle sleep succeeded, and he continued perfectly well.

Mr Janin mentions likewise an example of a young man who had hanged himself through despair, to whom he administered help as effectually as in the preceding case.

Mr Glover, surgeon in Doctors Commons, London, relates the case of a person who was restored to life after twenty-nine minutes hanging, and continued in good health for many years after.

The principal means used to restore this man to life were, opening the temporal artery and the external jugular; rubbing the back, mouth, and neck, with a quantity of volatile spirits and oil; administering the tobacco clyster by means of lighted pipes, and strong frictions of the legs and arms. This course had been continued for about four hours, when an incision was made into the windpipe, and air blown strongly through a canula into the lungs. About twenty minutes after this, the blood at the artery began to run down the face, and a slow pulse was just perceptible at the wrist. The frictions were continued for some time longer; his pulse became more frequent, and his mouth and nose being irritated with spirit of sal ammoniac, he opened his eyes. Warm cordials were then administered to him, and in two days he was so well as to be able to walk eight miles.

These cases are sufficient to shew what may be done for the recovery of those unhappy persons who strangle themselves in a fit of despair.

OF PERSONS WHO EXPIRE IN CONVULSION FITS.

Convulsion fits often constitute the last scene of acute or chronic disorders. When this is the case, there can remain but small hopes of the patient's recovery after expiring in a fit. But when a person who appears to be in perfect health, is suddenly seized with a convulsion fit, and seems to expire, some attempts ought always to be made to restore him to life. Infants are most liable to convulsions, and are often carried off very suddenly by one or more fits about the time of teething. There are many well-authenticated accounts of infants having been restored to life, after they had to all appearance expired in convulsions; but we shall only relate the following instance mentioned by Dr Johnson in his pamphlet 'On the Practicability of Recovering Persons Visibly Dead.'

In the parish of St Clements in Colchester, a child of six months old, lying upon its mother's lap, having had the breast, was seized with a strong convulsion fit, which lasted so long, and ended with so total a privation of motion in the body, lungs, and pulse, that it was deemed absolutely dead. It was accordingly stripped, laid out, the passing-bell ordered to be tolled, and a coffin to be made; but a neighbouring gentlewoman who used to admire the child, hearing of its sudden death, hastened to the house, and upon examining the child, found it not cold, its joints limber, and fancied that a glass she held to its mouth and nose was a little damped with the breath; upon which she took the child in her lap, sat down before the fire, rubbed it, and kept it in gentle agitation. In a quarter of an hour she felt the heart begin to beat faintly; she then put a little of the mother's milk into its mouth, continued to rub its palms and soles, found the child begin to move, and the milk was swallowed; and in another quarter of an hour she had the satisfaction of restoring to its disconsolate mother the babe quite recovered, eager to lay hold on the breast, and able to suck again. The child throve, had no more fits, is grown up, and at present alive.

These means, which are certainly in the power of every person, were sufficient to restore to life an infant to all ap-

pearance dead, and who, in all probability, but for use of these simple endeavours, would have remained so. There are, however, many other things which might be done in case the above should not succeed; as rubbing the body with strong spirits, covering it with warm ashes or salt, blowing air into the lungs, throwing up warm stimulating clysters or the smoke of tobacco into the intestines, and such like.

When children are dead born, or expire soon after the birth, the same means ought to be used for their recovery as if they had expired in circumstances similar to those mentioned above.

These directions may likewise be extended to adults, attention being always paid to the age and other circumstances of the patient.

The foregoing cases and observations afford sufficient proof of the success which may attend the endeavours of persons totally ignorant of medicine, in assisting those who are suddenly deprived of life by any accident or disease. Many facts of a similar nature might be adduced, were it necessary: but these, it is hoped, will be sufficient to call up the attention of the public, and to excite the humane and benevolent to exert their utmost endeavours for the preservation of their fellow-men.

The success of the Humane Society for the Recovery of Drowned Persons, has been equal to its philanthropic purpose, and a great proportion of these have been restored without medical aid. In other cases of suspended animation, similar means might be used with success, especially in sudden apparent deaths in fits, where the person, without any visible cause, falls down and expires; or when proceeding from casualties, suffocation from the sulphureous damps of coal-pits, mines, and the air of shut-up caverns, or other noxious vapours; lastly, in apparent deaths from cold, hunger, strangling, &c.; in all these cases remedies should always be attempted and persevered in, till actual death be completely ascertained.

Every person should be acquainted with such remedies, as these are not cases to wait for medical aid, nor do they require medical skill. The principal thing is, to restore warmth and the vital motions, by blowing air into the lungs, friction, bleeding, and administering clysters and cordials,

according to circumstances. The premium offered for the reward of recovering drowned or apparently dead persons is highly proper; but the innate satisfaction of restoring a fellow creature to life will itself be a complete reward to every benevolent mind.

CHAP. LV.

OF COLD BATHING, WITH REMARKS ON THE CASES IN WHICH THE WARM BATH IS MORE ADVISABLE.

Immersion in cold water is a custom which lays claim to the most remote antiquity. Indeed it must have been coeval with man himself. The necessity of water for the purpose of cleanliness, and the pleasure arising from its application to the body in hot countries, must very early have recommended it to the human species. Even the example of other animals was sufficient to give the hint to man. By instinct many of them are led to apply cold water in this manner: and some, when deprived of its use, have been known to languish, and even to die. But whether the practice of cold-bathing arose from necessity, reasoning, or imitation, is an inquiry of little consequence; our business is to point out the advantages which may be derived from it when judiciously resorted to, and the danger attending its improper use.

People are apt to imagine that the simple element of water can do no hurt, and that they may plunge into it at any time with impunity. In this, however, they are much mistaken. I have known apoplexies occasioned by going into the cold-bath,—fevers excited by staying long in it. There are also instances of maladies being so much aggravated by its constant use, as to be rendered incurable.

Absurd prejudices against cold-bathing are no less blameable and injurious. As a preservative of health, its regular use cannot be too much inculcated. It strengthens the lax fibres of children, and in all periods of life gives tone and vigour to the body, and enables the vital organs fully to perform their functions. It steels the frame against cold, damp, and changeable weather, and is the best preventive

of diseases arising from debility, a relaxed skin, or from obstructed or excessive perspiration.

Remaining too long in the water, however, is dangerous, and instead of strengthening is apt to relax the system, and to chill the blood, cramp the muscles, and occasion an excessive flow of humours towards the head. A single plunge is sufficient, though swimmers accustomed to the water may continue their favourite amusement for five or six minutes, and, if in the sea, considerably longer, without injury.

The morning is in every respect the best time for persons in health using this exercise, and it never should be used immediately after dinner, after much fatigue, or when over-heated. At the same time the body ought to have a gentle glow or temperate warmth by a little exercise before bathing, and after it is over, and the body rubbed dry instantly on coming out of the water; half an hour's exercise will be essentially serviceable.

With respect to the cold-bath used as a remedy in disease, much will depend on the nature and state of the disease; if it be a case of delicacy and danger, this remedy should not be resorted to without the best advice. In less essential situations, the following rules and observations may be of service.

It is always important to consider whether the patient have strength to bear the shock; for although it is true that the bath is an excellent bracer in all cases of relaxation, languor, and muscular or nervous weakness, yet it must ever be understood with a proviso, that there remains sufficient stamina to produce a due re-action of the heart and arteries, on which all the salutary effects of cold-bathing depend. If the immersion be followed by an agreeable glow, and sense of alacrity, it is a sure sign that it agrees with the constitution.

In scrophula, the cold-bath, and particularly in the sea, has been found of the greatest service, especially if the sea-water be taken also inwardly. It will then act both as a tonic or bracer, and a detergent or purifier; and certainly a regular course of sea-bathing, with the internal use of the salt-water, with good air, exercise, and a light nourishing diet, are the best means of checking the progress of the evil, and counteracting its morbid effects. But this is only with respect to the external symptoms of the malady, and

before it has arrived at a certain pitch, or reduced the patient to extreme weakness. In this case, and where any external effects of the disorder are present, salt-water bathing or drinking would be extremely injurious.

In cutaneous diseases in general, the cold-bath should not be ventured upon without medical advice. There are many of them, and many stages, where it would repel the eruption, and perhaps drive its seeds into some vital part, in spite of Nature's efforts to throw them off. In such cases the warm-bath must have the decided preference. Wherever sea-bathing is used, in cases where blotches or pimples appear externally, the sea-water should be taken at the same time, as a moderate and cooling aperient, to carry off impurities. Half a pint taken in the morning, immediately on coming out of the sea, and as much half an hour after, will generally be sufficient; but, if necessary, the dose may be increased without inconvenience.

In diseases of the skin and habit, sea-water, from the gently stimulating, detergent, and healing properties of its saline impregnation, is much preferable to river water. It cleanses sores, and promotes the process of granulation, and has been often known to discuss swellings that have resisted the most powerful medicines. Deep-seated ulcers, beyond the reach of other applications, sometimes yield to its penetrating action.

A great advantage of the sea-water in chronic diseases is, that it may be persevered in for a long time, without weakening the intestines or the constitution. Both the external and internal use of it, however, (which it is to be remembered should always go together,) must be employed at first only two or three times a-week, and proceeding gradually till the patient can bear it properly every day; and it should be gradually discontinued in the same manner.

When the cold bath occasions chillness, loss of appetite, listlessness, pain of the breasts, headaches, or bowel disorders, such consequences prove its disagreement with the patient.

But it may sometimes be highly dangerous to try the experiment. In all obstinate obstructions, and in diseases of the lungs or brain, as well as particular affections of the stomach and bowels, the consequences may be fatal. A nervous asthma, or atrophy, may be mistaken for a con-

sumption of the lungs, yet for the two first the cold-bath is beneficial, and in the last injurious, and probably fatal.

Persons of a plethoric or full habit ought not without precaution to use the cold-bath. They run the risk of bursting a blood-vessel, or producing an inflammation in an important part; but if they previously employ proper evacuants, and particularly the sea-water, for some time, bathing will have the best effects, either in plethoric or extremely nervous debilitated habits; even a single dip may produce fevers, palsies, apoplexies, and death.

Persons of extreme nervous debility, however, will be much benefited by the cold-bath, if not taken too precipitately. Not only women of delicate habits, and weakly children, but men in the same predicament, should begin with the tepid bath, at the same degree as that of animal heat, namely, 96° of Fahrenheit's thermometer, and reduce it gradually, according to the increase of the patient's strength, and internal powers of re-action.

This mode of beginning with the warm bath, reducing it gradually, and almost imperceptibly, till perfectly cold, and persevering in the cold bath, is particularly to be recommended in hysteric and hypochondriac cases, in rheumatic complaints, in the convulsive motions and muscular contractions, called St Vitus's dance; and generally in all that branch of nervous disorders which comprehend spasms, convulsions, epilepsies, and other symptoms of debility, or irritability of the system.

The principal exceptions to these rules are, in the treatment of spasmodic affections of the intestines, hooping-coughs, and coughs in general, convulsive asthmas, and complaints of the bowels or chest, where the cold-bath would at any time, and under any management, be extremely improper. In coughs and bowel complaints, bathing the feet in warm water is of great service, but to immerge the whole body either in the warm or cold bath, would aggravate the system.

Where there are any symptoms of paralytic affections discoverable, the inconsiderate use of the cold-bath cannot be too strictly prohibited. This complaint requires a great degree of external heat; the hot-bath is a sovereign remedy. Here, and indeed in every case, friction should never be neglected immediately after bathing.

After immoderate drinking, the cold-bath should never be resorted to. It will certainly cool the body, but it will be too powerful a refrigerant, and may for ever extinguish animal heat; or should Nature resist the shock, still it must increase the disorder of the stomach, the violence of the head-ache, and the derangement of the circulation, and will probably be attended with fever, or very troublesome eruptions.

In this case, however, the shower-bath, which can be easily procured, or which may be supplied by a common watering-pan, may afford beneficial relief. This application is in many cases extremely useful. Its action may be regulated at pleasure; and as the water descends like rain, it gently impels the blood towards the lower extremities, and prevents the danger which would arise from its sudden and too rapid determination to the lungs and head, in some of the cases before mentioned.

In hæmorrhages of every description, cold water may be applied with good effect, as also in immoderate fluxes of the menses; and in the interval of menstruation, cold-bathing, and drinking chalybeate-waters. But where the discharge of blood proceeds from affections of the brain, lungs, &c. or is habitual, as in piles, nothing could be so improper as to check the evacuation.

In the gout, and all its symptoms, cold-bathing would repel the disorder, and probably throw it into some vital part.

Although the warm-bath is in general to be recommended in obstructions of the menses, there are cases of retention after the usual age, when the cold-bath may contribute to restore the tone of the system; of these, however, a skilful physician must judge.

Persons returning from a hot climate, will find the warm-bath not only safer than the cold, but more conducive to restore their strength. It may be reduced by degrees to the cold-bath, as recommended in cases of debility.

CHAP. LVI.

OF MINERAL WATERS.

Mineral waters are classed as hot and cold, and as Chalybeate, Saline, Sulphureous, and Calcareous, as they are impregnated with iron, salts, sulphur, or lime.

Chalybeates may be distinguished as simple chalybeates, having no prominent impregnation but iron; and saline or purgative chalybeates, having a strong mixture of purging salt, which are very different from the others, both in taste and effect. Tunbridge is at the head of the former, and Cheltenham of the latter class.

The Tunbridge waters greatly stimulate the relaxed nerves, and brace the system; afford relief in flatulencies, bilious vomitings, irregular digestion, and other consequences either of debility or intemperance, and promote the circulation of the blood, and the various secretions. They are particularly serviceable in obstructions of the menses; but in floodings they are injurious. They are beneficial in obstructions of the urinary passages; and may be used with great advantage in chronic diseases, which arise from slow beginnings, and are attended with laxity of the solids, without much organic disease. But if the weakness proceeds from morbid affections of the mesentery, lungs, or other important organs, they are improper.

Plethoric persons should not use these waters without blood-letting, or other gentle attenuants.

They are often at first an active purgative, but their continued use is rather apt to produce costiveness; in which case gentle laxatives are necessary. The water itself may be converted to a purgative chalybeate, by the addition of a little magnesia or Glauber's salts. In the removal of obstructions, the warm bath is also recommended.

At first, the patient should take a quarter of a pint half an hour before breakfast, repeating the same at intervals in the forenoon, and augmenting the doses according to the sensations they excite. The usual hours for these doses are, eight, ten, and twelve o'clock. At first, however, they should not be taken fasting.

They may, in the first instance, produce giddiness, nausea, vomiting, pain of the head and of the heart, and sense of fulness over the whole body: but unless these symptoms continue obstinately, they should not be considered as unfavourable. It is a judicious practice to immerge a bottle of the chalybeate in hot water, to take off the chill.

The waters of Islington and Hampstead are in their qualities not much inferior to the Tunbridge.

A great matter, however, in the use of all the waters is,

to attend to a proper regimen. Pure air, temperate living, early and regular hours, active diversions, agreeable company, and relaxation from business, are essentially necessary.

The waters of the German Spa and Pyrmont being more active, their use requires greater caution.

The Spa water is four times as strong as the Tunbridge, and of course the dose must be proportionate. At first a sufficient quantity of warm water mixed with it will be useful both to reduce it, and bring it to a temperature proper for the constitution of the patient; and here it is particularly indispensable for persons of a plethoric habit, previously to use attenuants.

The Pyrmont waters contain as much iron, and twice as much fixed air as those of the German Spa; a necessary and appropriate caution must therefore be observed. The waters of Pyrmont and Spa afford the most refreshing and wholesome draught, to relieve in the morning a weakness of the stomach, occasioned by too free use of the bowl or the bottle the night before.

Pyrmont waters, when diluted with new milk, are found very serviceable in gouty cases, and may be safely prescribed in this form, during the intervals of the fits and the absence of inflammatory symptoms.

Those waters may be conveyed to any distance, and will retain their medical properties, with little or no diminution, for two years, if inclosed in bottles well corked and covered with cement. They contain so much fixed air, that it is usual, after filling the bottles, to leave them uncorked for a while, to let the excess of the fixed air escape.

Purging chalybeates, as those of Cheltenham and Scarborough, besides their iron impregnation, contain such a portion of purgative salt, as to give them a regular determination to the bowels. On first drinking, they are apt to excite a giddiness and slight head-ache; but this soon goes off, and their good effects are sensibly felt. Of all laxatives, they are perhaps the most agreeable, as they never occasion griping or languor. They improve the appetite, give tone to the stomach, promote vivaciousness, and cleanse the body. Half a pint repeated three or four times a-day, is enough for any patient; but this must be determined by the habit, and the effects they produce. When taken as an alterative, a considerably smaller quantity will

of course suffice. The best time to take them is summer, and they may be well accompanied with the warm-bath. They are beneficial in glandular and visceral obstructions, in the first symptoms of dropsy, in scrophula, in bilious complaints, and in scorbutic eruptions.

The Scarborough waters contain not above one-third of the purging salts of those of Cheltenham, and thus act for the most part only as an alterative, unless when they receive the addition of some purgative salt, similar to what they hold in solution. Scarborough, however, to counterbalance this, enjoys an uncommon salubrious air and excellent sea-bathing: and there is here also a simple chalybeate spring, convenient for patients, where a determination to the kidneys may be desirable.

Simple saline mineral waters are of the same nature, but not so strongly impregnated with purging salts, nor so efficacious as sea-water. They are numerous about the metropolis; as Bagnigge-wells, Kilburn, and Acton; but they are now of little repute. When they were in vogue, it was usual and necessary to add a further solution of a similar salt.

The most celebrated saline water is that of Seltzer, which may be said to form a particular species, being also slightly alkaline, with a strong impregnation of fixed air. A great deal of it is brought to this country; and, to preserve its virtue, it must be instantly bottled and kept close corked, otherwise the fixed air will quickly evaporate, and the water become not only vapid, but putrescent. If well preserved, it sparkles when poured into a glass, and has a gentle saline and somewhat pungent or acidulous taste. One of the stone bottles in which it is imported, may be taken in a day at three intervals. It is by no means disagreeable to the taste, and its effects are generally exhilarating. In cases of hectic fever, it is very serviceable diluted with milk. It corrects expectoration, checks sweating, and contributes much to the patient's repose.

Its rapid determination to the kidneys, the action of its stimulus, and perhaps some power as a solvent, concur to produce very agreeable effects from it, particularly in nervous affections of the stomach and bowels, indigestion, bile, acidity, heartburn, spasmodic pains in the alimentary canal, and diseases of the urinary organs. In these cases, with

the addition of a proper quantity of vitriolated magnesia, taken every two or three days, it will form a proper aperient.

Several of the foregoing waters have a slight impregnation of sulphur; but there are also waters where this is the chief ingredient, and which are accordingly termed sulphureous. The principal of these is Harrowgate.

Great benefit has been derived from the proper use of the Harrowgate waters in eruptions of the skin, in rheumatisms combined with scurvy, in obstructions, and in disorders of the first passages; acidity, indigestion, vitiated bile, worms, putrid sores, piles, and jaundice. They answer two important purposes; first, acting as an alterative, and inducing, by a mild operation, a gradual change in the habit; and secondly, when employed in larger doses, are an easy and delicate purge, which does not weaken the patient so much as other laxatives. There are also, at Harrowgate, baths of the same mineral, which, in many disorders, are a powerful auxiliary to the drinking.

It only now remains to speak of the calcareous minerals, better understood under the description of hot springs. Of these the hot springs of Bath have a decided superiority.

The Bath waters, drank fresh from the spring, increase heat, raise the pulse, and excite the secretions, acting at the same time on the nervous system. They not only promote perspiration and urine, but increase saliva, and quench thirst better than any other liquid, but should not be taken when there is any tendency to fever. The relief they afford in colics and convulsive retchings attending the gout in the stomach, and similar affections, evince their anti-spasmodic powers.

This, like the saline mineral, is strongly purgative, and, as constant purging for months together must debilitate the strongest constitution, the popular idea of perseverance in its use should be corrected. Purging is often necessary in acute diseases to cleanse the body, and in chronical cases it may pave the way for the operation of other medicines; but it will seldom effect a cure, and, by exhausting the patient, it will generally leave him in a worse condition than it found him. A powerful stimulant like sulphur, however useful when taken in moderation, and at proper intervals, must, if improperly and habitually employed, weaken and destroy the digestive organs.

Those who take the sulphureous or saline waters to cure any obstinate malady, should use them as an alterative, and so as to produce hardly any effect on the bowels. With this view a half-pint glass may be taken at bed-time, (but by no means after eating a hearty supper), and the same quantity an hour before breakfast, dinner, and supper, varying the dose according to the chalybeate.

These waters give a great stimulus to the appetite, but it ought to be checked. A light and rather diluting food is most proper, and no person, during such a course, should eat to the full extent of his stomach. Moderate exercise and exhilarating amusements are also highly necessary.

The Bath waters, used externally, unite all the virtues of warm baths, and may be used of any heat, from one hundred and six degrees and under: the baths are also commodious and extensive, so as to afford the patient room to move freely about in them, with an uniform warmth. They are more stimulant than the common warm-bath, raise the pulse and heat of the body to a higher degree, without being violently sudorific; they are an excellent diuretic, and, instead of debilitating, they impart vigour and alertness, and promote the appetite.

The diseases in which they are to be recommended, are, the green-sickness before it is gone too far; visceral obstructions; palsy; gout, when the inflammatory symptoms have abated; and swellings of the knee; hypochondria; weakness of the organs of digestion; colic; jaundice, when arising from obstructions of the biliary ducts; hysterics; spasmodic affections of the womb, and painful menstruation; and in cutaneous and leprous eruptions.

It is safest to begin with a wine-glassful before breakfast. If this feel easy and cordial, and excite no pain or sense of fulness in the head or eyes, it may be repeated at noon, and increased by degrees as it suits the constitution.

The Cross-water bath, the warmth of which, when fresh from the spring, is one hundred and twelve degrees, is usually recommended to begin with. After that, the King's, or hot-bath, which is four degrees higher in temperature, may be resorted to.

In respect to the bath, the patient should at first continue in it only five or six minutes. Should this produce no disagreeable symptoms, but improve the health, strength, and

spirits, it may be gradually increased, till even half an hour, but never so as to create lassitude or faintness. The waters of the hot-bath are twelve degrees warmer than the Cross-bath, which is a much greater difference than at the pumps.

There are also private baths of any temperature to suit the patient's habit or complaint. The best time for bathing is early in the morning; and it may be repeated twice, or at most thrice a-week. A partial bathing is in many respects preferable to a total immersion.

Buxton waters approach nearest to those of Bath of any in the kingdom; but their temperature is only eighty-two degrees.

Taken internally in doses of near a pint before breakfast, and as much before dinner, they afford relief in flatulence, heartburn, nausea, indigestion, and affections of the kidneys and bladder. As a bath, they contribute to restore the action of limbs that have lost their power from violent inflammation, either occasioned by external injury, or preceding acute rheumatism; but if it be the consequence of a paralytic stroke or gout, the warmer temperature of the Bath waters afford more benefit.

Matlock tepid springs are sixteen degrees cooler than those of Buxton, and form a good intermediate bath between Buxton and the sea. They are, therefore, properly employed in preparing invalids for the latter, when this is necessary to complete a cure. Taken internally, they have little medical virtue.

The hot well of Bristol is of an intermediate warmth between Buxton and Matlock, being seventy-four degrees. It is not used to bathe in, but has acquired great reputation in consumptive cases. Part of its virtues in this obstinate complaint must be ascribed to the mild, sheltered, yet ventilated situation of the hot wells, and to the rational plan of diet, exercise, and amusements, pursued there.

It is also efficacious in relaxations of the stomach or bowels, occasioned by long residence in hot climates, bilious diarrhœa, dysentery, and diabetes. A regular course of these waters is excellent in quenching the thirst, keeping the skin moist, allaying fever, and correcting a preternatural discharge of urine. Being impregnated with a little purgative salt, aperient medicines ought in many cases to accompany their use.

The full dose is half a pint, drank early in the morning, and repeated before breakfast, after an interval of half an hour's gentle exercise. The same two doses to be repeated midtime between breakfast and dinner.

Of the hot springs on the continent, as the German Spa, Aix la Chapelle, Bareges, Bourbon Loncey, Prudel, and others, it is unnecessary here to go into any particular notice. Persons intending to use these will require much more detailed accounts of their virtues and use than the limits of the present work would permit.

On the subject of mineral waters it is only necessary to add, that artificial minerals of all kinds are now made fully equal in their virtue to the natural ones, and with this important superiority, that they can be made to any degree of strength ; a circumstance which cannot fail in time to render this beneficial curative more generally diffused.

CHAP. LVII.

OF THE COW-POX.

The small-pox, as has been already observed in a former part of this work, is one of the most severe and dangerous diseases to which mankind are subject. Many thousands fall victims to it ; and even when it does not prove fatal, it frequently produces painful and lingering complaints. It is injurious to beauty, by the pits and scars which it often leaves on the face ; it often destroys the sight by the inflammation and scales which it induces on the eyes ; and sometimes terminates in swellings and ulcers, by which the strongest constitutions are gradually undermined, and ultimately ruined.

Inoculation has, no doubt, rendered small-pox much less fatal ; but even inoculated small-pox is often attended with fever, and other alarming symptoms, and sometimes terminates fatally. These circumstances have prevented the practice of inoculation from becoming general, and there is reason to believe, that the practice of partial inoculation, though beneficial to the individuals inoculated, has, on the whole, been injurious to mankind, by spreading the contagion to numbers who might have escaped the disease alto-

gether. Mankind are therefore under the greatest obligations to Dr Jenner, for introducing to public notice an easy, safe, and effectual method for preventing the small-pox, by the substitution of another disease. This disease is known by the name of cow-pox, and is now acknowledged to possess the property of producing a change in the human constitution, which enables it to resist the variolous contagion.

The cow-pox is a sort of mild disorder of pustules on the teats, to which this animal is subject, and which is prevalent in Gloucester, Dorset, Somerset, and other counties in the west of England. It has also been traced in Ireland, and in Italy, and some other parts of the Continent. This disorder is communicated to the milkers; and it having been observed, that no person who had ever had this disease was ever afterwards subject to the contagion of small-pox, and that it never proved fatal, Dr Jenner, a physician at Berkeley, in Gloucestershire, made a full investigation of the fact, and proved, that the inoculation first from the cow, and then from one human being to another indefinitely, may be done without any diminution of its specific power; and that it is a complete preservative from the small-pox. Having ascertained the truth of these circumstances, Dr Jenner attempted to render his observations generally useful, by communicating the disease received by the milkers to children who had never been infected with the small-pox. This he successfully accomplished; and the happy result of these experiments has facilitated the introduction of the inoculated cow-pox into almost every corner of the world. For this invaluable discovery the British parliament have rewarded him with £10,000; and he has received the most ample testimonies of respect and gratitude, from the most illustrious public bodies and individuals of all nations.

In propagating the cow-pox by inoculation, the greatest care must be taken to procure proper matter, otherwise a spurious disease may be produced, which does not preserve the constitution from the small-pox, and yet may readily be mistaken for the genuine cow-pox, by those who are not accurately acquainted with the appearances of this disease. To guard against accidents of this kind, cow-pox matter should be taken from the pustule on one of the days between the fifth or ninth inclusive from the inoculation. The matter may fail in producing the genuine disease if it be not

thin and limpid, but after the ninth day it usually becomes thick and purulent, and cannot often be procured sooner than the fifth. The matter first taken is the strongest, and when a large quantity is discharged it becomes proportionally weaker.

The puncture at which the matter is to be inserted should be made in the hollow that is perceptible in each arm, nearly half way between the shoulder and the elbow. The manner of performing the operation is, to take a clean lancet, the end of which being held upright, is made to puncture the pustule. There soon rises a globule of the cow-pox matter, which keeps gradually rising on the surface. The point of the lancet is immersed in this fluid, and inverted beneath the scarf-skin, and carried so deep as just to scratch and irritate the true skin. In this part of the operation, the lancet should be held in such a direction, that the matter may run down towards the point; then being withdrawn, it is wiped over the inoculated part. To prevent failure, two separate incisions may be made. Instead of a lancet a common needle may be used, which will be found to answer the purpose equally well.

The following account of the symptoms which commonly attend the genuine cow-pox, we extract from an excellent treatise on the subject by the learned and ingenious Dr George Bell of Edinburgh.

'On the third day from the insertion of the virus, if the infection has taken place, a small inflamed circular spot will be observed, with the puncture in its centre. At this early period a slight swelling may be felt, and even seen on looking sideways at the part.

'On the fourth day, the inflammation has spread, and the swelling and hardness have evidently increased; the puncture, which hitherto appeared like a particle of hardened blood, begins to assume a yellowish brown colour, and forms into a crust.

'On the fifth day these appearances have advanced; and on touching the tumour, or on viewing its profile, a slight depression is discovered in the centre, owing to the edges being elevated by a small quantity of a transparent bluish or pearl-coloured fluid that is secreted into the vesicle; and the inflamed circular spot, which was visible on the third

day, is now, in a great measure, occupied by the new-formed vesicle.

'In most instances, the virus, which is now in its most active state, may be taken at this time for the purpose of inoculation; but in some cases, it cannot be collected in sufficient quantity till the sixth or seventh day.

'About this period, the swelling gradually increases, and the vesicle contains a larger quantity of lymph.

'On the eighth day, although it sometimes happens on the sixth or seventh, a slight degree of inflammation appears near the base of the vesicle, of a dark red colour, which lessens in brightness till it reaches the extremity of the swelling, where it is lost as it were in the surrounding skin. Within the circumference of this circular inflammation, or areola, the skin is hard and irritable, so that the least degree of pressure excites pain; and the glands in the arm-pits, in some instances, are stiff, swelled, and painful, but seldom in any considerable degree.* The patient becomes sick and restless; has sudden changes from heat to cold; his pulse is quick; he complains of thirst, and is apt to start on falling asleep.

'This constitutional affection is by no means an uniform occurrence; and it is not requisite it should be so, in order to ascertain that perfect vaccination has taken place; but at the same time its appearance, in conjunction with the other symptoms, must certainly increase our confidence in the efficacy of the inoculation. Dr Jenner had, at one time, some doubts with regard to this, but he is now quite decided as to vaccination giving security "when no indisposition has been perceptible throughout the whole progress of the pustules on the arm."†

'But although these symptoms appear occasionally in a slight degree, they are commonly not so severe as to require any medical treatment, and seldom continue longer than twenty-four hours.

'As soon as this feverish attack takes place, the vesicle, which had been advancing slowly and regularly to maturity, theincreases more rapidly; inflamed ring, or areola, with which it was surrounded, spreads in the course of a few

* Sometimes the pain and swelling in the axilla appear on the sixth day from the inoculation. See Jenner's Inquiry, &c. p. 38.

† See Letter from Dr Jenner, in Appendix to Willan on Vaccine Inoculation, p. 3.

hours to nearly double its former size, and on the tenth day, or sometimes sooner, is an inch and a half, often two inches, in diameter. This inflammation, or efflorescence, which seems to be of the erysipelatous kind, when it takes place to a sufficient extent, may be considered as a pretty certain test of the matter having been genuine, and of its having produced the real vaccine disease.

'Hitherto the vesicle has been most elevated at the margin, and has had an evident depression in the centre; but about the ninth day the depression begins to fill up, and on the tenth or eleventh, the whole surface is either plain, or the centre is more elevated than the margin.

'Some time between the eighth and tenth days, an eruption of small pimples, or rather a rash, now and then appears on different parts of the body, bearing a strong resemblance to that which is frequently observed before the eruption of the inoculated small-pox.

'This rash is of no farther consequence than as it affords an additional proof of the disease having entered the constitution; and it requires no particular medical treatment.

'On the eleventh day the vesicle has attained its full maturity; and about this time, the virus contained in it is very similar to purulent matter; it becomes less fluid than it was before, and also loses much of its activity, as is found to be the case on its being used.

'On the twelfth day the inflammation is much diminished, leaving a slight degree of redness at the base of the vesicle, and an inflamed ring round the circumference of the areola, while the intermediate space is nearly of the same colour with the sound skin.

'This double ring, as it may be termed, is a distinctive mark of the real cow-pox, provided it takes place after the symptoms already enumerated; although, as it is not perceptible in every case, especially where the inflammation has been more severe than usual, the want of it does not necessarily imply that the disease is of a spurious kind. The fluid in the vesicle now begins to dry up, the cuticle to separate, and the crust, which before was brown, acquires a darker hue, and becomes more extensive.

'On the twelfth or thirteenth day, the external margin of the areola completely disappears; and on the fifteenth, scarcely a vestige of inflammation is perceived.

'From the time of the matter becoming dry, the crust is perceived to be thicker and more elevated, and of a darker colour; and some time between the eighteenth and twenty-second day, it separates, and falls off, when it is found to be semi-transparent, and leaves either a pit, somewhat larger than that of a single small-pock, or a slightly ulcerated surface.

'The cicatrix, or scar that remains, is permanent, corresponding in size and shape with the vesicle to which it succeeded; and a number of minute indentations may be observed in the skin, shewing the cellular structure of the original vesicle.

'Lastly, it must be remembered, as I have observed already, that in the genuine cow-pox, the inflammation does not commonly take place, in any considerable degree, till the third day; from which time till the eleventh day, it continues gradually to increase. Yet this is not the case universally: I have known inflammation follow the insertion of the virus immediately, and the vesicle pass afterwards through all its stages in the most regular manner.

'The time at which the puncture becomes inflamed is various, and seems to depend on one or other of the following circumstances.

'1. On the age and habit of the patient.—In weakly infants, the inflammation is not so rapid in its progress, and does not proceed to such a height as in adults, or in robust children. The sickness and febrile symptoms are commonly more severe in adults than in early infancy. In young children, indeed, they are often scarcely to be observed, if it be not by their making them more fretful than usual for a few hours.

'2. On the kind of matter that is used in the inoculation.—If the matter has been taken at a late period of the disease, when it approaches to purulence, it loses much of its specific activity, and often has no farther effect than that of exciting an immediate and slight inflammation similar to what any irritating substance inserted beneath the cuticle might be supposed to induce; but this dies away on the third or fourth day after the inoculation. In some cases, again, it produces a good deal of inflammation, and a variety of irregular appearances, which have been occasionally mistaken for the genuine cow-pox, by those who

were not aware that such irregularities sometimes take place, or who had not attended sufficiently to the progress of the symptoms. At other times the matter lies in a manner torpid till the fourth or fifth day, when the part inflames suddenly, and the disease runs its course regularly from that period in the usual manner.

'3. On the season of the year.—The cow-pox, like the small-pox, has been observed in many cases to proceed with greatest rapidity in warm weather; and in winter, the progress of the pustule is less rapid than it is in summer.

'It is necessary, therefore, that practitioners should be aware of these circumstances, that they may not be surprised at their occurrence; that they may guard against them as much as possible; and that mistakes on their part, which might be ascribed to the failure of the cow-pox, may be avoided.

'From all that has been said, it appears, that the indisposition arising from the inoculated cow-pox is so slight, as scarcely to deserve the name of a disease; but the greatest degree of fever that has ever taken place from the concurrence of several unfavourable circumstances, such as the inoculation being performed during very hot weather, on a very robust patient, or during a fit of teething, has uniformly yielded to the means that are usually adopted in the common febrile attack in children, whether these arise from accidental cold, or some other occasional irritation; I mean keeping the patient on a cool moderate diet, his body open, and bathing him for two or three minutes up to the neck in warm water at bed-time. As it is, however, a point of much importance to know that the virus has entered the constitution; and as the febrile symptoms which appear about the eighth day, form one of the strongest proofs that this has taken place; we should not, in any instance, attempt to prevent their accession. When the irritation arising from the vesicle is considerable, and excites much inflammation, a gentle laxative or two, of calomel, senna, or jalap, seldom fail to remove it; and dusting the inflamed parts with flour or hair-powder, is the best local application that can be made.

'From scratching, or other causes, the vesicle is sometimes ruptured, and a sore is formed, which, if it is not checked in its progress, will, in bad habits of body, such as

where there is a scrophulous or scorbutic taint in the patient's constitution, occasionally spread in different directions, as frequently happens in small-pox. Whenever the vesicle inflames too much, and afterwards ulcerates, if it does not, in the course of a few days, yield to the mildest dressings, such as simple ointment, the sore should be sprinkled every second day with calcined alum in fine powder, by which it is commonly cured.

'But this is seldom necessary. Excepting in a few instances, I have not had occasion to make use of any kind of dressings.'

Inoculation may be advised at all ages, in every season of the year, and in whatever habit of body the patient is, excepting in the first six or eight weeks of infancy, or in severe fits of teething; during the continuance of measles, scarlet fever, itch, and in general all other eruptive and febrile diseases. It may be proper to observe, however, that there are some states of the body which do not readily admit the vaccine disease, as is said to be the case with patients infected with the itch, as well as those who have been recently using much mercury or sulphur.

CHAP. LVIII.

OF DIET.

THERE is no country in the world where the people eat so much solid animal food as in England. This, and bread, constitutes their principal diet, without a due proportion of vegetables. This mode of life is not only expensive in itself, but excites thirst, and leads to an immoderate use of strong beer, and other stimulating liquor, which keeps the lower orders in indigence. To indulge this propensity, they sacrifice every thing, and particularly their health.

The following pages are written with a view of teaching the common people a cheaper, more wholesome, and more nutritious regimen, in regard to diet, which we trust may not be altogether unattended to, at a time when every thing has risen to an enormous price, and in a country whose

riches in a great measure depend on the cheapness of labour.

We are well aware of the difficulty of overcoming rooted habits, and have but little expectation of inducing adults to alter their mode of life; but if we can prevail on them by reason to train up their children in a better regimen, a reform in this part will gradually ensue, and a total change may in time take place in the people's manner of living;—a change that would be salutary in every respect, and would render the people less dependent on animal food and bread for their subsistence, thus arming them against the hardships occasioned by a scarcity or dearth of either of these articles in future.

No animal eats such a variety of food as man. Fitted by Nature for an inhabitant of every clime, he devours them all, and, in a civilized state, his table is supplied from all the quarters of the world. To suit his palate, and to correct the improper qualities of meats in their natural state, he calls in the aid of cookery, and extends it to all degrees of luxury.

Man's frame and structure mark him as intended by Nature to use both animal and vegetable food. To apportion them properly is a most important point, and for which no universal rule can be laid down; much depends on the person's constitution, situation in life, and other circumstances. The most general recommendation that can be given, but from which there are many exceptions, is to use of vegetables double the quantity eaten of animal food.

Animal food is certainly more nutritious than vegetable. The use, however, of it alone, or nearly so, is extremely injurious. It acts as too great a stimulus of the system, accelerates too much the circulation of the blood, excites nausea and thirst, occasions putrescence in the stomach and bowels, and brings on violent griping pains, cholera, and dysentery. The laborious may, and perhaps ought to, use a considerable proportion of animal food, their pursuits requiring it; but the sedentary, the plethoric, and above all the studious, ought to live chiefly on vegetables, and to abstain from the free use of strong liquors.

To the great use of animal food, we may ascribe the frequency of consumptions in England, and a variety of other

disorders, particularly scurvy, which few families escape, and which, it is universally known, is only to be corrected by a copious use of vegetables.

But the body is not affected alone by this diet. It also greatly influences the mind. It blunts the imagination, and induces a ferociousness unknown to men whose food is chiefly taken from the vegetable kingdom.

A moderate use of animal food is doubtless to be recommended; the mode of using it, however, deserves consideration. The people of England are too fond of solids; a pound of meat is merely a pound of meat, which a healthy man can eat for his dinner; whereas, the same quantity stewed down with proper vegetables will furnish an ample and nourishing meal for half a dozen of persons. To inculcate, therefore, among our countrymen the great advantage they would receive from this mode of cookery, is the great object of this part of the work. It is a subject which of late years has beneficially occupied public attention, and many useful receipts have been published for making cheap, nourishing, and wholesome dishes for the poor, consisting of broths, soups, stews, and pottage, and calculated to afford a hearty and plentiful meal, without either bread or drink. Count Rumford has, of all others, paid most attention to this improvement in cookery for the poor, and in his Economical and Philosophical Essays, given a variety of forms well adapted for the purpose, but which, we fear, have in general been too little attended to. The soup-shops, established some years ago, in a time of great dearth, were formed on a good principle, and were on the whole a useful species of charity. They were not, however, without objections, and one great disadvantage of them was, that they raised to an extraordinary price those coarser parts of the meat, which the poor and economical were formerly wont to purchase for soups, but which were now become out of the reach of those above receiving charity.

In Scotland, for time immemorial, the common people have been in the habit of living in the manner now recommended. Their breakfast and supper is hasty-pudding, or oatmeal eaten with milk; and their dinner broth, with variety of vegetables and meat; often without meat, or what the French call *soup maigre*. They thus require no bread

for breakfast or supper, and little dinner: and the Scotch peasants rarely taste any other liquor than water; yet no persons are more healthy, cheerful, or active, nor retain their strength to a longer period of life, while their external appearance denotes comfort and respectability. The English labourer, on the other hand, who is burnt up with broiled salt meat, or dry bread and cheese, has a continual thirst, and spends most of his earnings in liquor. This food, by acting as a powerful stimulant, may make him do more work for some time, but he seldom lives long, and is an old man when he should be in his prime. Meanwhile his expenses for food and drink preclude him from a decent and proper attention to dress, and he is too often seen dirty and in rags, while he is earning from one to three pounds a-week.

Roasting or boiling meat are most wasteful modes of cookery, which should be avoided by the poorer class, as much of the substance, and the most nutritious parts, are lost by scorching, and fly off by evaporation. But what shall we say to the extravagance of the many thousands, even of the poor, who throw into the kennel the liquor or soup of the meat which they boil? Surely in these hard and expensive times, if persons will not take the benefit themselves of this essence of the meat, they might at least give it to the poorer part, who would, from such refuse, boiled up with vegetables, make many a hearty meal.

To those accustomed to broth, it is not only healthy, but particularly agreeable to the palate. The natives of North Britain, who come into England, feel a very sensible want of their early food, and greedily devour a mass of barley-broth or herb-soup, when accident throws in their way this their rational luxury. In all the nations of the Continent, broths, soups, and stews, form the principal modes of cookery. In England alone, the general mass of the people live on solid butcher's meat, bread, cheese, butter, and ale or porter. An alteration in this respect cannot, we repeat, be expected in persons grown to manhood. Every change of diet, to be introduced with effect, must begin with children. Whatever we are accustomed to eat when young, we generally prefer during life. Were the children of this country taught to eat hasty-pudding and milk for breakfast

and supper, and broth with vegetables and meat boiled in it for dinner, they would relish these dishes as long as they lived, would find little occasion for bread, and less for drink; they would thrive better than on their present diet, and their morality would be improved by temperance and sobriety. At present, the father fond of strong beer, makes his son from infancy guzzle it at every meal, while the mother does not fail to give her little favourite tea, as often as she indulges in that debilitating beverage. Thus the son becomes a tippler, and the daughters sippers of tea, instead of taking solid food, and are eaten up with vapours and nervous disorders.

It has been said that the poor cannot afford time or fuel to make soups. Yet they find means to afford both to boil a kettle and make tea. A much smaller fire, with scarcely any attendance, would make a comfortable soup or stew. The English boast of their good living, while there is no nation in Europe which so little understands the culinary art, or dresses to so little advantage, either to the palate or pocket, the excellent animal food and esculent vegetables with which the country abounds.

Bread, or what the West-Indians term bread-kind, that is, any farinaceous substitute for bread, forms a considerable part of the diet of all nations. Most people, however, in this country, eat more bread than is conducive to health. A due proportion of it is wholesome, but excess in this, as in any thing else, is injurious. A surfeit of bread is of all others the worst. The French consume a vast quantity of bread, but its bad effects are corrected by their copious use of soups and fruits.

One great use of bread is, to form a mass adapted to fill up the alimentary canal, and carry the nutritious juices through that passage in such a state as to render them fit to be acted on by the lacteal absorbents, which take up the nourishment and convey it to the blood. Hence bread may be considered the soil from which the nutriment is drawn. Considering it in this light, the finest bread, though certainly most nutritious in itself, is by no means the best adapted to distend the alimentary canal, and to blend with the more substantial articles of the diet. It is nutritive in itself, but its chief purpose is what we have just mentioned.

Bread is the most expensive mode of using grain, especially as it is charged with two heavy additional charges in passing through the hands of the miller and baker. The former frequently grinds down with the wheat extraneous and improper matter, while the latter bakes up with it lime, chalk, alum, and other deleterious ingredients.

Fine flour too much approaches to starch, an article far too astringent and viscid for this branch of food.

Household bread, made by grinding down the whole grain, and separating from it only the coarser bran, is doubtless the most wholesome, and even most palatable, though it may not so greatly please the eye; indeed a mixture of wheat with other grain, particularly with rye, will be found, after a little use, both most palatable and conducive to health. Mixtures of wheat with potatoes, rice, and other farinaceous substances, which the late high prices considerably introduced, is much preferable to bread made of fine flour, which is so much a favourite, especially among the lower orders. For the more laborious, peas, beans, oats, and maize or Indian corn, form a proper mixture either with wheat or rye. Oats alone, which are used for bread in a great part of Scotland and some part of Ireland, make a healthful bread. Barley-bread passes too quickly through the alimentary canal; but bread of barley and peas-meal is very nourishing. Of peas alone, it is both hard and indigestible, and still more so of beans.

Much of the bread in this country is consumed by children. It is always ready, and when the child cries for food, a piece of bread is put into its hand. As a corrector of other food, it is, as we have already said, beneficial, but here too much of it is particularly improper. Children are apt to be troubled with acidities in the first passages; and it is well known that bread, mixed with water, and kept in a degree of heat equal to that of the human stomach, will soon turn sour.

Tea may here properly be introduced and considered, as with it there is by far the greatest consumption of bread. This beverage is of very late introduction, almost within the memory of aged persons of the present day, but now become universal in this country. The inhabitants of Great Britain consume a greater quantity of this herb than all the

other nations of Europe. The lowest Englishwoman must have her tea for herself and family ; and as it contains no nourishment, it must of course be accompanied with bread and butter. The quartern loaf goes little way among a family of children, and if we add the cost of tea, sugar, butter, and milk, the expense of one meal would fill their bellies with wholesome and nutritious food three times a-day. Tea among the higher classes is a luxury ; among the lower it is an article of diet. Many women in particular in humble life, make it and its accompaniments almost their sole food.

The immoderate use of tea has already, in a great measure, effected a general change of constitution in the people of this country. Debility, and a constant irritability of fibre, have become common not only in women, but in men. It has been the principal promoter of nervous disorders ; has nearly made a conquest of one sex, and is making rapid strides towards vanquishing the other.

Were women aware of the train of diseases induced by debility, did they consider how disagreeable these diseases make them to the male sex, they would avoid an excess in tea as a most pernicious poison.

To the heavy, sluggish, or plethoric habit, it may be serviceable, nor is it to be condemned as an article of luxury after a full meal, or in a crowded assembly ; but as an article of diet it is fraught with the most pernicious effects.

Boiled Grain.—Bread is the readiest and most portable mode of using grain ; other forms, however, are no less agreeable, and some of them more wholesome. Simple boiling is of all others the best, and does not, like bread, produce either acidity or viscidity ; it, besides, precludes all adulteration, and is a preparation much less laborious and artificial than baking.

A greater proportion of mankind use boiled rice than bread ; and several other sorts of grain, particularly barley and oats, boiled in the same manner, make good substitutes for bread. Peas likewise, made in the form of a pudding, are a hearty substitute, of which most persons are fond, and many prefer to bread. Both peas and beans boiled in soup are nourishing, as well as palatable, and require not the addition of bread. They are of all grain the most hearty ;

of this there is a good proof in labourers, who, after having been much fed on this legume, remove to farms where they use other species of grain, and who soon complain of a diminution of strength, and long for their peas-meal.

Boiled barley, eaten with milk, butter, or molasses, is considered as a luxury in Holland; it is the principal food of the Dutch sailors, who are both healthy and robust. Barley is, perhaps, the best lithing ingredient for broth; and grits, or coarse oatmeal, is little inferior.

Oatmeal is frequently made into bread, but its best form is hasty-pudding, eaten with milk, as we have already mentioned. It is a general but a very erroneous idea, that it is heating, and inductive of cutaneous diseases. These proceed more from the want of cleanliness than from any particular aliment. The frequency of these complaints, with which Scotland is derided, and which are attributed to the use of oatmeal, is so far unfounded, that they are much more common among the lower orders in London, than in any part of North Britain. If oatmeal were heating, it would hardly be recommended as forming in gruel one of the most diluting and cooling beverages.

A late learned lexicographer, sarcastically defined oats to be in England the food of horses, and in Scotland the food of men. Were the horses in England to eat less of it, and the men more, it would be of considerable advantage, and tend greatly to lessen the expense of living. The Scotch, it is to be hoped, will neither be reasoned nor laughed out of the use of this wholesome article of diet.

Indian corn is a very hearty substitute for bread, and is best plain boiled, or formed into pudding or dumplings. The negroes of America prefer it to rice, and the Bavarian peasants to flour: it is highly nutritious, and the cheapest food known.

Buck-wheat boiled is of a very mucilaginous nature, and consequently nourishing. It constitutes a principal part of the food of the common people in several countries, particularly Russia.

Butter, though a good article in diet, is used much too freely in England. Like all other oleaginous substances, it has a disposition to rancidity, which is greatly accelerated by the heat of the stomach, and often produces an

uncomfortable rising in the stomach, proceeding from the difficulty of its oily quality mixing with watery fluids. Like other oils, it relaxes the stomach, and impedes the action of digestion: hence the custom of giving rich broths and fat meats to persons of a voracious appetite. Bread and butter constitute a great part of the food of children, which without doubt occasions in a great degree the humours with which they are troubled. We hear women often complain of indigestion. Is this to be wondered at, when we consider the sedentary lives they lead, and the quantities of muffins, crumpets, and other spongy breads, they devour twice a-day, soaked in liquid butter; when we see the loads of pastry, the most indigestible of all forms of butter, which they greedily consume? With some vegetables, and with the leaner sort of fish, butter is properly used; but to use it with fat meat, or with such heavy fish as salmon and herrings, must be extremely prejudicial, except in strong athletic persons employed in hard labour.

Cheese eaten in small quantities after meals is serviceable, but as a diet nothing can be worse. It is extremely indigestible, occasions constipation, fires the blood, and excites a constant craving for drink, and, while it loads the stomach, imparts little or no nourishment: at the same time it is one of the most expensive articles of food that can be used. Many of the working people in London expend a third more in bread and cheese and porter, than would procure them palatable and nutritious dishes.*

Roots and *fruits* form a large class of the substitutes for bread. In warm climates, these in general preclude the use of bread altogether. The inhabitants of South America use

* A labouring man will be very poorly fed with half a pound of cheese in the day; this costs - - - - - - 5*d.*
Bread - - - - - - 4
Porter - - - - - - 10
1*s.* 7*d.*

Whereas he would be amply satisfied with a soup or stew made of half a pound of beef, costing - - - - 4
Vegetables - - - - - - - 2
Bread - - - - - - - - 2
Porter - - - - - - - - 5
1*s.* 1*d.*

the plantain, banana, and yam, either boiled or roasted, almost exclusively. In like manner, the natives of the South Sea Islands use the bread-fruit, now introduced into our West India colonies.

Potatoes in this country form the principal substitute for bread. Still, however, they are not cultivated and used to the extent they ought to be. In Ireland, and a great part of Scotland, they are a principal article of diet; they are not so hearty a food as corn, but no man will perish for hunger who has potatoes. As they thrive on every soil, and are less liable than grain to suffer from the inclemency of the season, we must blame ourselves, if we suffer a famine to exist. Indeed, no such thing can ever happen, if due attention be paid to the culture of this valuable root. A far greater quantity of farinaceous food can be raised on an acre of ground, than if sown with any sort of corn. Some of the stoutest men are brought up on milk and potatoes; and Dr Pearson, who has bestowed much pains in analysing this root, says, that potatoes and water alone, with common salt, will be complete nutriment. To render them a good substitute for bread, nothing more is required than simple boiling or roasting: but when intended to serve as a meal, they require the addition of milk, butter, or gravy. Stewed mutton and potatoes, known by the name of Irish Stew, is a cheap, nourishing, and palatable dish. The excess of fat in the mutton, which would be otherwise lost, is advantageously absorbed in the potatoes. It is, however, to be observed, when potatoes are used in stews or broths, they ought previously to be boiled, and the water thrown away, as it contains something deleterious. Indeed, botanists have classed this as a species of nightshade, which it is well known is an active poison.

After the potato, the *Jerusalem artichoke* deserves to be mentioned, not only as being somewhat of the same nature, but as being still more productive, and easily raised; yet it is a root hardly known by the generality of people, so little has it been cultivated. This plant grows six or seven feet high, and has a number of roots attached to it like potatoes. Their taste being somewhat similar to artichoke-bottoms, it has been called an artichoke; but why it has obtained

the epithet of Jerusalem is not so evident, as it is a native of Brazil.

The *parsnip* is reckoned one of the most nourishing of our esculent roots, as containing the greatest quantity of saccharine matter, and being at the same time of easy digestion.

Carrots are something of the same nature as parsnips, but more solid, and harder of digestion. When properly cultivated, they grow large, succulent, and palatable, particularly in soups and stews. The culture of this root much deserves attention. The farmer would find it extremely profitable, as well as a useful crop, to alternate with grain, and it is well known to be an excellent food for horses. Much of the oats they consume might be saved by this much less expensive substitute. It is also an admirable food for cows, and greatly enriches their milk.

The *turnip* possesses little or no saccharine matter, and is therefore not so nutritive as several other roots. It is, however, wholesome and emulcent, when properly cultivated, and forms the principal article of food for cattle in the winter.

Salsafy, *skirrets*, and several sorts of *beets*, particularly that called the *root of scarcity*, are pleasant, nutritious, and digestible.

Cabbage, and other sorts of *kale*, including *cauliflowers* and *brocoli*, are all likewise useful and wholesome vegetables, although rather inclined to create flatulency, but which is completely corrected by a proper accompaniment of meat.

Onions have long been considered a most valuable vegetable. In Egypt, they were a favourite article of food four thousand years ago. They are in that country more sweet and less pungent than here. The onions of Portugal have a similar quality. They are best dressed simply boiled, and are thus rendered mild, of easy digestion, and go off without leaving any disagreeable heat on the stomach and bowels. They also form a savoury addition in soups, as do also their pungent species *shallots* and *garlic*. The strong smell these roots communicate to the breath, may be remedied by eating a few parsley-leaves immediately after. The *leek* is somewhat similar to the onion, only that the stock

may be used as a pot-herb as well as the root. Indeed it is one of the best, most savoury, and wholesome of herbs; the Welsh are fond of it to enthusiasm, and the Scotch make an admirable dish, by stewing an old cock, a piece of corned beef, or both, with plenty of leeks.

There are many other roots and plants, valuable for culinary purposes; what we have mentioned, however, are the principal. It may be proper to observe that, were they better boiled than they generally are in this country, it would extract a considerable quantity of the air contained in them, and thus diminish their flatulence.

We cannot conclude this article without observing, that every reasonable attention should be paid to the constitution and habit; and that the choice of food, for the preservation of health, and the support of the human frame, will depend, very frequently, on these previous considerations. A tendency to flatulence and windy affections in the stomach or intestines, must convince any rational mind of the impropriety of excessive indulgence in those vegetable substances which naturally produce it. A propensity to animal food, on the contrary, must be no less pernicious, in the most common intimation of reason, as well as by the corroboration of experience, to the habit and constitution of others. In one respect, an accumulation of bile will be created; in the other, the most dangerous symptoms of inflammation must certainly follow. We will not disturb the feelings of our readers by alarming them without an evident necessity; but we feel it our duty to impress upon their minds the great expediency of making themselves acquainted with the nature and peculiarities of their own constitution. After all that can be said, the most eminent physician must, in all chronical cases, whensoever it may be deemed advisable to consult him, be compelled to grope his way in the dark, without such a communication as this knowledge would always afford.* In most cases also, the necessity of that advice would be prevented; for, although we are unwilling to repeat to our friends the words of an ancient adage, its per-

* Nay, we will add, that in acute cases, and such as leave no time for hesitation, we could adduce instances where a reserve of communication of previous habits, and the uses and operations of previous medicines, must have been productive of fatal effects.

tinency is so fully impressed on our minds, that we think it cannot be regarded or considered, by any rational person, without the fullest conviction of its importance.

Although the place of bread may be occasionally supplied by farinaceous roots and other vegetables, yet we would by no means wish to discourage the culture of grain. The culture of grain is the culture of men. While the husbandman is raising food for his fellow-creatures, he is laying the foundation of health and longevity to himself and his offspring. While the manufacturer or artificer is sitting in an awkward posture, breathing confined, and perhaps contaminated air, the peasant rises with the sun, eats his wholesome meal of milk and farinaceous food, hies him to the field, where he spends the day in useful labour, inhales the fresh breezes, and at eve returns home with a keen appetite, to enjoy his simple repast and sound repose.

No manufacture enriches a nation so much as the culture of grain ; nor is it subject to the uncertainty of other manufactures, which often depend on the caprice of fashion, as the necessaries of life always find their value somewhere. Were proper encouragement given to agriculture, Britain would at all times not only have a sufficiency of grain for home consumption, but a surplus for exportation. This would contribute more to her real wealth, the happiness of her people, and the stability of her government, than the increase of her manufactures and trade, or the extension of her territory.

It is matter of regret that Britain, at a time when agriculture is cultivated as a science, should not raise grain for the supply of her own inhabitants, but be obliged to depend on foreign states for this essential necessary of life. Until an adequate remedy can be found for this evil, the free use of the various substitutes for bread must tend to ameliorate the situation of the poor, and to lessen the price of labour.

The great consumption of animal food, and the immense number of horses which are kept in this country, greatly increase the scarcity of grain. Their number has been computed at two millions, and every horse, on an average, is supposed to consume the produce of three fertile acres, consequently, the produce of six millions of acres is annually consumed by them ; this land would produce more grain than is sufficient to maintain half the inhabitants of

Great Britain. Two hundred and sixty thousand of these animals are kept for pleasure. It may be said that they contribute to health; but this we deny. Did our ladies of fashion and fine gentlemen make use of their limbs, instead of being dragged about in carriages, they would both benefit themselves and the public.

GLOSSARY.

ALTHOUGH terms of art have been sedulously avoided in the composition of this treatise, it is impossible entirely to banish technical phrases when writing on medicine, a science that has been less generally attended to by mankind, and continues therefore to be more infected with the jargon of the schools, than perhaps any other. Several persons having expressed their opinion that a Glossary would make this work more generally intelligible, the following concise explanation of the few terms of art that occur, has been added in compliance with their sentiments, and to fulfil the original intention of this treatise, by rendering it intelligible and useful to all ranks and classes of mankind.

Abdomen. The belly.

Absorbents. Vessels that convey the chyle from the intestines, and the secreted fluids from the various cavities into the mass of blood.

Acrimony. Corrosive sharpness.

Acute. A disease, the symptoms of which are violent, and tend to a speedy termination, is called acute.

Adult. Of mature age.

Adust. Dry, warm.

Antispasmodic. Whatever tends to prevent or remove spasm.

Aphthæ. Small whitish ulcers appearing in the mouth.

Astriction. A tightening or lessening.

Atrabilarian. An epithet commonly applied to people of a peculiar temperament, marked by a dark complexion, black hair, spare habit, &c. which the ancients supposed to arise from the *atra bilis*, or the black bile.

Bile or *Gall.* A fluid which is secreted by the liver into the gall-bladder, and from hence passes into the intestines, in order to promote digestion.

Cacochymic. An unhealthy state of the body.

Caries. A rottenness of the bone.

Circulation. The motion of the blood, which is driven by the heart through the arteries, and returns by the veins.

Chronic. A disease whose progress is slow, in opposition to acute.

Chyle. A milky fluid separated from the aliment in the intestines, and conveyed by the absorbents into the blood to supply the waste of the animal body.

Comatose. Sleepy.

Conglobate Gland. A simple gland.

Conglomerate. A compound gland.

Contagion. Infectious matter.

Crisis. A certain period in the progress of a disease, from which a decided alteration either for the better or the worse takes place.

Critical. Decisive or important.

Critical Days. The fourth, fifth, seventh, ninth, eleventh, thirteenth, fourteenth, seventeenth, and twenty-first, are by some authors denominated critical days, because febrile complaints have been observed to take a decisive change at these periods.

Cutis. The skin.

Cutaneous. Of or belonging to the skin.

Debility. Weakness.

Delirium. A temporary disorder of the mental faculties.

Diaphragm. A membrane separating the cavity of the chest from that of the belly.

Diuretic. A medicine that promotes the secretion of urine.

Drastic. Is applied to such purgative medicines as are violent or harsh in their operation.

Empyema. A collection of purulent matter in the cavity of the breast.

Endemic. A disease peculiar to a certain district.

Epidemic. A disease generally infectious.

Exacerbation. The increase of any disease.

Fæces. Excrements.

Flatulent. Producing wind.

Fœtid. Emitting an offensive smell.

Fœtus. The child before birth, or when born before the proper period, is thus termed.

Fungus. Proud flesh.

Gangrene. Mortification.

Ganglia. } Venereal excrescences.
Gummata. }

Gymnastic. Exercise taken with a view to preserve or restore health.—The ancient physicians reckoned this an important branch of medicine.

Hæmorrhage. Discharge of blood.
Hæmorrhoids. The piles.
Hectic Fever. A slow consuming fever, generally attending a bad habit of body, or some incurable and deep-rooted disease.
Hypochondriacism. Low spirits.
Hypochondriac viscera. The liver, spleen, &c. so termed from their situation in the hypochondria, or upper and lateral parts of the belly.

Ichor. Thin bad matter.
Imposthume. A collection of purulent matter.
Inflammation. An increased vascular action in any particular part of the body.

Ligature. Bandage.
Lixivium. Ley.

Miliary Eruption. Eruption of small pustules resembling the seeds of millet.
Morbific. Causing disease.
Mucus. The matter discharged from the nose, lungs, &c.
Mysentery. A double membrane which connects the intestines to the back-bone.

Nausea. An inclination to vomit.
Nervous. Irritable.
Nodes. Enlargements of the bones generally produced by the venereal disease.

Pectoral. Medicines adapted to cure diseases of the breast.
Pelvis. The arch of bones at the lower part of the trunk; thus named from their resembling in some measure a bason.
Pericardium. Membrane containing the heart.
Peritonæum. A membrane lining the cavity of the belly, and covering the intestines.

Perspiration. The matter discharged from the pores of the skin in form of vapour or sweat.
Phlegmatic. Watery, relaxed.
Phlogiston. Is here used to signify somewhat rendering the air unfit for the purposes of respiration.
Plethoric. Replete with blood.
Polypus. A diseased excrescence, or a substance formed of coagulable lymph, frequently found in the large blood-vessels.
Pus. Matter contained in a boil.

Rectum. The straight gut, in which the fæces are contained.
Regimen. Regulation of diet.
Respiration. The act of breathing.

Saliva. The fluid secreted by the glands of the mouth.
Sanies. A thin bad matter, discharged from an ill-conditioned sore.
Schirrous. A state of diseased hardness.
Slough. A part separated and thrown off by suppuration.
Spasm. A diseased contraction.
Spine. The back-bone.
Styptic. A medicine for stopping the discharge of blood.
Syncope. A fainting fit attended with a complete abolition of sensation and voluntary motion.

Tabes. A species of consumption.
Temperament. A peculiar habit of body, of which there are generally reckoned four, viz. the sanguine, the bilious, the melancholic, and the phlegmatic.

Vertigo. Giddiness.
Ulcer. An ill-conditioned sore.
Ureters. Two long and small canals which convey the urine from the kidneys to the bladder.
Urethra. The canal which discharges the urine from the bladder.

APPENDIX,

Containing Notes illustrative of the recent Improvements in Medical Science.

ALIMENT AND DIET, (Pages 50. & 515.)

THERE is no subject of greater importance, treated of in this work, than that of aliment, or diet. With a proper knowledge of this subject, not only might many of the most painful and protracted diseases be prevented, but as many might be cured without the aid of either physic or physicians. Were the importance of the subject better understood, we would not see so many persons eagerly using every medicine that is recommended, but at the same time entirely neglecting every restriction or precaution as to diet. In the short space of a note or chapter, it would be impossible to convey all that should be known on this subject; but a few general principles and facts, may be added to those mentioned by Dr Buchan, and may guide in the regulation of the diet, according to individual habits and circumstances.

A few brief remarks may be made on the subject of digestion. The nourishment derived from food, arises from its being digested, that is, being converted by a series of changes into blood, which, circulating through the blood-vessels, affords nourishment to the different parts of the body. This takes place in the following manner:—the food being first masticated and mixed with saliva in the mouth, is received into the stomach, where it is mixed with the gastric juice, a fluid formed in the stomach when food is swallowed, in the same manner as the saliva is in the mouth; partly by the aid of this fluid, which is acid, and partly by the gentle and constant agitation of the whole, by the movements of the stomach the food is gradually con-

verted into a greyish paste, called chyme, which now passes out of the stomach into the smaller intestines or bowels. It is now mixed with the bile from the liver, and with other fluids, and is gradually changed into a milky-like substance named chyle. The chyle, as it passes along the bowels, is taken up by a number of small vessels, which open into the bowels, and is conveyed through them until it is finally poured into a large vein near the heart, where it mixes with the blood, and is distributed through the whole body, for its nourishment and support. As the chyme becomes converted into chyle, the indigestible part of it is separated, and along with some of the fluids of the intestines, it passes into the larger bowels, where it acquires its peculiar odour, and accumulates until it is expelled at intervals, as habit or necessity requires.

When *fluids* are received into the stomach, they are either directly taken up by the blood-vessels, distributed to the stomach, or some, such as milk, are coagulated or curdled by the acidity of the gastric juice; and then the fluid part which separates, enters the blood directly, and the solid parts are digested in the manner already described.

The preceding description of the process of digestion, suggests one or two important hints as to the mode of eating, and will enable the reader to understand the remarks to be immediately made on the effects of different kinds of diet.

In the first place, it is of great importance that the food should be properly masticated, and mixed with saliva in the mouth before it is swallowed, in order to prepare it for the subsequent changes which are to take place in the stomach. Inattention to this circumstance, it cannot be doubted, is one cause why many individuals are so much troubled with indigestion; as we have neither a gizzard like the fowl, nor teeth in our stomach like the lobster, the food must be reduced to a pulp in the mouth before it is swallowed, otherwise it cannot be easily or properly digested.

Again, the facts which have been stated, will explain how over-eating retards digestion, for when the stomach is *distended* with food, its movements are prevented, and the food not being properly agitated and mixed up with the gastric juice, digestion cannot go on so rapidly as it ought; the powers of the stomach are exhausted before its work is finished, and the food passes from it unchanged, or becomes decomposed,

and distends the stomach with gas, giving rise to flatulence and all its horrors. In the same way, most individuals, especially those labouring under weakness of the stomach, feel a sense of uneasiness or distension about the stomach after taking a quantity of broth, or much fluid of any kind along with their food. By the distension of the stomach, its movements are prevented, and consequently that agitation of the food which is necessary for digestion; the food thus remains unchanged until the greater part of the fluid is gradually absorbed from the stomach by the blood-vessels, and then only can the process of digestion proceed. Another evil which arises from the introduction of too much fluid into the stomach along with solid food, is the dilution of the gastric juice, which is thus rendered so weak as to lose its power of dissolving the food,—in this way also is digestion retarded. From the foregoing statements, it will be evident, that a small quantity of solid food will often be digested with ease by a weak stomach, when a larger quantity, or the same quantity with the addition of a considerable amount of fluid, would retard digestion, or exhaust the powers of the stomach before the process was completed. An attention to the quantity of food taken, is therefore of as much importance as attention to the quality of it.

It might be inferred from these facts, that the best food in all circumstances, was that which contained the greatest quantity of nutriment in the smallest bulk; this however is by no means entirely the case. For, in the first place, the food which contains the most nutriment, is from its nature not always the most easily digested; for example, fat contains four times as much nutriment as lean, yet it is well known that few stomachs can readily digest it. Again, although too much food loads the stomach and retards digestion, a certain amount of bulk and consistency is necessary. Food which does not contain some innutritive matters, has been found highly injurious, if used alone for any length of time. Thus dogs, when fed on sugar, or oil, or gum alone, although they may do well for a time, gradually become emaciated and die. The want of consistency, and admixture with innutritive matter, is perhaps the reason why oils and fat are so difficult of digestion, and explains to us the reason why the inhabitants of Kamtschatka, who are compelled frequently to live on fish-oil, find it necessary

to mix it with saw-dust or the rasped fibres of plants, in order to render it digestible. It is well known too, that living on too concentrated a diet, that is, one which consists mostly of nutritive matter, even although it be more digestible than fat and oily substances, produces acidity and disorder of the stomach, besides engendering a full habit of body. This circumstance is observed even among the lower animals, for when our horses are fed for a length of time with oats and beans alone, which contain of course more nutriment within a smaller space than grass or hay, they exhibit symptoms of derangement of the stomach, and require to be bled or purged to preserve them in life, if they are not severely worked. These remarks may illustrate the propriety of a proper admixture of food of different kinds, and in different circumstances. For the reasons last stated, too much animal food would be injurious, especially to an individual of sedentary habits; a judicious mixture of animal and vegetable diet is the best in ordinary circumstances; he will require most of the former who has the greatest bodily labour to undergo; while he who takes little exercise, if he would avoid apoplexy and inflammatory affections, will live chiefly on the latter, confining himself mostly to farinaceous food, such as bread, potatoes, rice, barley, &c. or fish, milk, fruits, and a moderate admixture of green vegetables of various kinds; and he, again, who labours under weakness of stomach, must live on animal food, and the more digestible and nourishing of the vegetable kingdom, such as rice, wheaten bread, and such like,—avoiding fat, butter, and oily substances, or broths, and green vegetables, which by their bulk would prevent digestion.

A different diet, also, is suited to different climates, as well as to different habits. The Hindoos, the negroes of West India, and those of Senegal, live chiefly on rice, sugar, and gum; the inhabitants of more temperate countries live on a mixture of both animal and vegetable diet; while in the inclement regions of the north, the Esquimaux gluts himself on the blubber of the seal.

The use of condiments or spices with the food is advantageous in certain circumstances, in others it is injurious. *Salt* appears to be an essential element in our food; in moderate quantities it renders the food palatable, and assists

digestion ; individuals deprived of it are assailed with indigestion, and infested with worms.

Vinegar, in moderate quantity, is a useful and agreeable stimulus, and assists the digestion, particularly of fish, of oily and fatty substances, and of some vegetables : but the habitual use of it in large quantities, for the purpose of preventing or reducing corpulence, is a highly injurious custom, and productive of fatal consequences if persevered in.

The use of pickles and of hot spices, such as pepper, &c., is occasionally useful in stimulating the stomach, and exciting the appetite ; but they are perhaps better adapted for the warm climates of which many of them are the products, where the exclusive use of vegetable food may necessitate the addition of some such stimulants, in order to promote digestion ; but in this country, where so much animal food is used, they are, in general, to be condemned : they may relieve an overloaded stomach by exciting its exhausted energies into action, in the same way as a glass of brandy will remove the distressing feelings occasioned by a surfeit ; but they ultimately destroy the tone of the stomach, and too often prove injurious by occasioning a false appetite, and leading to the use of more food than the stomach can digest.

As to the times of eating, and the time at which exercise should be taken with relation to our meals, it may be remarked, that the food is rarely digested in less than two or three hours after it has been taken, unless the diet has been very light and digestible ; by this time, however, a considerable quantity of nourishment has passed into the blood ; but, in general, after a *full* meal, the process is not complete until four or five hours have elapsed. It is, then, about two, three, or four hours after a meal, when a new supply of blood has begun to circulate, that we feel most energy of mind and body, and it is then, consequently, that we are best adapted for severe labour or thought. Too much exertion immediately after eating retards digestion, and too much immediately before a meal is equally injurious, perhaps more so. Nothing can be more advantageous than gentle exercise in the open air before eating, it invigorates the frame, and creates an appetite. But nothing can be more prejudicial than the practice pursued by many, who, from their avocations, are compelled to sit or stand for six or

seven hours in their places of business, of taking a long walk after all this confinement, in the hope of strengthening their frame and increasing their appetite. Their bodies, already exhausted by confinement and want, are taxed with the additional exertion of a long walk, and they then eat when completely fatigued; the consequence is indigestion, and the aggravation of all those evils which the exercise was intended to cure. When the body is exhausted by fatigue, the stomach shares in the general debility, and cannot perform its functions. Exercise, then, before meals, should be gentle, and not carried to such an extent as to cause *fatigue*; a precaution more especially to be attended to by those who labour under weakness of the digestive organs, or who are confined during the greater part of the day at sedentary occupations.

Again, the stomach should never be loaded with a fresh meal, until that already contained in it has been digested. This interval will vary in different individuals, and according to the quantity taken at a time. One of weak digestive powers should eat sparingly at each meal, and make the intervals between them short. But in this particular, the appetite perhaps affords a better guide in ordinary circumstances, than any specific rules.

The terms in which Dr Buchan has spoken of *tea*, might lead to the inference that it is an unnecessary and injurious luxury; but it is chiefly as a substitute for more substantial diet among the poorer classes that he reprobates it, and very justly. Its use, however, in moderate quantity, a few hours after dinner, is proved by experience to be not less safe than agreeable. If digestion is not yet finished, it affords a grateful stimulus which excites the stomach to the completion of its function, and it affords to the blood a necessary supply of liquid for the dilution of that nutritive matter which it has received by the digestion of the food.

Dr Buchan is high in his praise of broth, as a more wholesome and economical mode of using animal food than roasting or boiling it, and eating it in the solid form alone. It may not be an unnecessary caution to add, that although for these reasons broth is an advisable form of diet for the poorer classes and those who have strong digestive powers, yet, where the stomach is *weak*, nothing can be more prejudicial than distending it with broth containing peas, carrots,

turnips, cabbages, and such vegetables. For the dyspeptic, on the contrary, the most advisable plan is to eat his animal food in the solid state, boiled, or what is much better, roasted or broiled, in which forms it contains most nutritive matter, and is most easily digested.

To the judicious remarks made by the Author on individual articles of food, there is little that could be added in a work of this nature, and still less that could be amended, notwithstanding all the researches which have been made on this subject since the period at which he wrote.

AIR. (Page 61.)

IMPORTANT additions have been made to our knowledge of the causes of impurities of the air, and of their noxious effects, by the chemical discoveries of the present time.

Atmospheric air is known to consist principally of two invisible vapours or gases, called *nitrogen* and *oxygen*, with a minute quantity of *carbonic acid gas*, and a variable but small portion of watery vapour.

Carbonic acid gas is highly poisonous when it is breathed to any extent. The quantity existing in the atmosphere in ordinary circumstances, is so minute as to impart, so far as we know, no deleterious qualities to the air; but when it is diffused through the air in considerable quantities from any accidental cause, it may be the occasion of fatal accidents. This may take place in various ways. The air which is expelled from the lungs at every breath, is found to contain a quantity of carbonic acid gas, so that if there is not a free circulation of air through a room which is filled with people, the atmosphere of the apartment soon becomes so charged with this gas, as to be unfit for respiration. Injurious effects must ensue; they are in fact observed and felt every day in our crowded assemblies; and nothing surely can be imagined more prejudicial to one who is sick and feverish, than to allow his chamber to be crowded with anxious friends, while every door and window is carefully secured to prevent the access of fresh air. Every one has heard of the black hole of Calcutta, a room of twenty feet square, with one small window; into this room 146 persons were thrust, and before next morning only 23 survived to

tell the horrors of the night. In the same manner, 28 persons were crammed into a small room of six feet square, by the keeper of the Round house of St Martin's in 1742, and four were suffocated in consequence. These facts are sufficient to point out the danger of crowded and ill-ventilated apartments.

Carbonic acid gas is apt to collect in old wells, and in caverns ; often, by incautiously descending into such places, individuals have lost their lives. During the process of fermentation this gas is also evolved, and a servant girl nearly lost her life by entering a cellar where grape-juice was fermenting. And in such cases it is of importance to state that, contrary to the general opinions on this subject, individuals have perished in these circumstances, although lights have continued to burn near them.

A large quantity of carbonic acid gas is formed by the burning of charcoal, and many fatal accidents have occurred by individuals going to sleep in apartments having no vent, and leaving a choffer of burning charcoal beside their beds to keep them warm.

The vapours from burning coals are still more noxious than those from charcoal, in consequence of their containing a large quantity of another highly deleterious gas, *sulphurous acid.* Many men, working in mines where these gases had escaped, or collected from want of proper ventilation, have been destroyed, or suddenly seized with the most alarming symptoms, even when working with their lights burning. To sleep in a room with a coal fire must therefore be dangerous, if it is not properly ventilated.

Breathing the common gas with which our streets and houses are supplied, although it is daily done to a considerable extent with impunity, is not devoid of danger if the air be very strongly impregnated with it ; in one case at least, an individual lost his life by falling asleep in a warehouse where there was a leak in one of the gas-pipes.

Another very poisonous gas, named *sulphuretted hydrogen,* deserves notice. It is disengaged from necessaries ; and many fatal accidents have occurred to the workmen employed in cleaning out the large pits, which, in Paris, are commonly connected with privies. Its effects are sudden and fatal. These facts strongly point out the necessity of cleanliness, and the importance of having effective means

for the constant conveyance of all filth from our houses and towns, and of having the receptacles for it at a proper distance from all places of abode.

Nothing is more effectual for avoiding such accidents as those alluded to, or for preventing infection, than a free circulation of air through our dwelling-houses. Next to this, if there be reason to dread infection, chlorine must be regarded as the most likely means of destroying it; and for this purpose the chloride of lime, which has been recently most extensively employed for this object, should be used; or the apartment may be fumigated by pouring vitriol upon saltpetre, or upon common salt.

Change of Air is of great importance for the cure of many diseases, particularly those of a protracted nature. Its good effects are especially observable in the cure of hooping-cough, where a change, even when apparently to the worse, has done good. The other diseases in which it is chiefly advisable are rickets, scrofula, old coughs, rheumatism, obstinate dyspepsia, particularly if attended with what are called nervous symptoms, ague, and also during the convalescence from certain severe diseases, such as fever.

INTERMITTING FEVER, or AGUE. (Page 122.)

Modern chemistry has made us acquainted with a more eligible mode of giving bark, the great specific in the cure of ague, than that of powder, which from its bulk often disagrees with the stomach, and excites sickness and vomiting. From the yellow bark, a substance, named *Quinine*, has been extracted, which, in small bulk, possesses all the beneficial properties of the Peruvian bark, and is now almost invariably used in preference. Eight grains of the sulphate of quinine, are equal to an ounce of bark. It may be given, for the cure of intermitting fever, in doses of two grains every two or three hours, during the intervals between the paroxysms. It may be given in solution, in infusion of roses, or water, with the addition of a small quantity of diluted sulphuric acid, or elixirof vitriol; or, if the taste be disagreeable, it may be made up in the form of pills with conserve of roses. I have been informed by a medical man, who has had extensive opportunities of treating this disease,

in one of the marshy districts of England, that he found the most successful mode of giving quinine, was to combine it with a small quantity of opium, and make it up into pills with the extract of gentian. The proportions used by him were two grains of the sulphate of quinine, with two of the extract, and about an eighth of a grain of opium, in each pill, one of which was given every two or three hours.

Another medicine, which has been found of great efficacy in the cure of this disease, is *arsenic.* The preparation in common use is *Fowler's Solution*, or the *Tasteless Ague drop.* It contains four grains of white arsenic in each ounce of the liquid, and is given in doses, at first of four or five drops, gradually increased to twenty-five, or thirty. On account, however, of the activity of arsenic as a poison, it should only be used under the direction of a physician.

In addition to the use of quinine, attention must also be paid by the patient to the regulations as to regimen, the proper evacuation of the bowels, and the treatment during a paroxysm, which are recommended in this work ; and above all, he should be removed from the neighbourhood of the marshy situation which has in all probability been the origin of his disease.

FEVERS. (Pages 130—135, 154—167, &c.)

The chapters on *acute continual*, *nervous*, and *putrid* or *spotted* fevers, ought to have followed each other in this work ; they are descriptions of different modifications of the same affection ; they occur most commonly as distinct varieties, but sometimes the more simple passes into the most severe form. The first is what is commonly called *continued fever ;* the second is generally denominated *mild typhus fever*, to distinguish it from the third, which is known by the name *malignant typhus.* No physician, at the present day, hesitates to bleed freely at the commencement of either of these fevers, if the symptoms and strength of the patient are such as to warrant it. It was inferred by the old practitioners, from the great prostration of strength and rapid sinking which occur in the latter stages of typhus, that bleeding in the outset was improper ; but it is now well known that a copious bleeding at the commencement, if there is grea

heat of skin, throbbing of the temples, pain in the head, and quick full pulse, is highly proper, mitigating the severity of the subsequent symptoms, and lessening the danger of the disease, by subduing the tendency to inflammation of the brain, and other parts of the body. The same object may be attained also, by the application of leeches, which should be applied to the head, or any other part, where pain and tenderness on pressure point out the existence of inflammation. Leeches may be applied when the strength of the sufferer would not warrant bleeding from the arm, or after that has been already done, and a repetition of it appears unadvisable, and the pain continues. After bleeding, the application of blisters to the head and neck, &c. if there be delirium or insensibility, is of great importance. As the latter stages come on, when the strength begins to be exhausted, and the pulse becomes weak, small, and the extremities cold, the free administration of wine is essentially necessary. In fact, the great objects to be attended to in the treatment of all fevers are, to subdue inflammation in the first stage, in whatever part of the body it is threatened, whether in the brain, the lungs, or the bowels; and to keep up the strength in the last stage by the administration of cordials, and light nourishment. Sago, or arrow-root, with a small quantity of wine, should be given repeatedly; and it is sometimes necessary, where the weakness is very great, to give wine and brandy in very great quantities. If the patient cannot swallow, or swallows with great difficulty, his strength may be supported for some time by means of injections of sago, arrow-root, starch, beef-tea, &c. with the addition of wine, brandy, turpentine, or other stimulants.

On the first appearance of the symptoms of fever, a vomit may be given with benefit, which may be repeated once or twice at intervals; there seems reason to believe that the further progress of the fever has thus occasionally been cut short. Another method, which has been used, we believe, with success, is cold affusion, or dashing cold water over the patient; this can only be done with robust persons, in the first accession of the fever, when the skin is dry and hot. In delicate constitutions, where this cannot be done, the body may be frequently sponged with lukewarm water, or cold water and vinegar; this will moderate the temperature of the skin, and prove grateful to the feelings of the patient.

When there is frequent vomiting or retching in the course of the complaint, it may be checked by giving effervescing draughts of soda water, or of soda powders; which in general form a cooling and agreeable drink, and may be taken repeatedly by the patient.

To the judicious remarks of Dr Buchan, there is little more of a popular nature that could be added; the treatment of fever requires skill, discrimination, and experience; and in every case the attendance of a medical man is of great importance, as he alone can be qualified judiciously to direct and diversify the treatment, according to the strength of the patient, and the state or stage of the disease.

DISEASES OF THE CHEST. (Page 135, &c.)

Our knowledge of the distinctive characters of the different diseases of the chest, has been rendered much more accurate of late years, partly by more extensive experience and careful observation, and partly by the facilities afforded for detecting these diseases by the use of the stethescope, an instrument lately invented for the purpose of listening to the sounds produced within the chest by the breathing, and the beating of the heart. As it requires, however, the education and skill of a physician, to recognise the changes produced in these sounds by different diseases, it would be out of place to enter into this subject in a popular work; but a few of the results of those recent and improved modes of studying these diseases, may enable us to add some important facts to those stated by Dr Buchan in his descriptions.

PLEURISY. (Page 135.)

The most obvious and distressing symptom in this disease, is the sharp pain generally felt in one side, which is aggravated by taking a long breath, coughing, or lying on the affected side; this is accompanied with fever and a dry hard cough; the matter coughed up is thin and transparent; but if it should be mixed with blood, there is reason to believe that there is inflammation of the lungs, a much more dangerous disease. It may be added, that as the disease advances, the sound of the breathing within the chest can-

not be heard on applying the ear to the affected part: that side of the chest may also become somewhat larger than the other; and when this is observed, we may conclude that an effusion of fluid has taken place, giving rise to what is commonly termed "Water in the Chest." This termination of the disease is that alluded to in the end of the last sentence but one of Dr B.'s description of peripneumony.

The treatment is very accurately detailed by Dr Buchan. To his remarks it may be added, that in the protracted or chronic form of this disease, when the fever is absent, but the cough, difficulty of breathing, and pain continue in some measure to affect the sufferer, although less violently, or when there is reason to believe that fluid has become effused, the repeated application of blisters, the introduction of a seton, or issue, or the use of a stimulating liniment over the affected part, are the means to be chiefly relied upon. It is also occasionally advisable to give mercury cautiously, and to use medicines which increase the perspiration and urine. With these means must be conjoined a light diet, and the use of bitters, or tonics, to strengthen and improve the general health.

PERIPNEUMONY. (Page 140.)

Inflammation of the lungs, or *pneumonia*, as it is now generally termed, has only of late years been correctly distinguished from *pleurisy*. It is often accompanied with inflammation of that part of the pleura which covers the inflamed lung, and it is then called pleuro-pneumony.

Pneumonia is characterised by fever; pain in some part of the chest, which is duller and less acute than it is in pleurisy; rapid and difficult breathing, to a greater extent than in pleurisy; cough, at first perhaps dry, but in the course of a few hours accompanied with the expectoration of a thickish tough matter, which assumes a reddish colour, as if mixed with rust or blood. The breathing becomes very laborious; the sufferer lies, generally, on his back; and the countenance, which is flushed, sometimes on one side only, is expressive of great anxiety. In addition to these symptoms, the sound of the breathing, heard on applying

the ear, or stethescope, over the affected part, is at first altered in its character, and is soon no longer heard at all; and the chest, if gently struck at this part, no longer emits the clear sound, which is heard on striking other parts in the same manner, but a dull sound as if a dense body, incapable of containing air, were inclosed within the ribs; signs which, perhaps, could only be properly appreciated by a physician.

In the treatment of this highly dangerous disease, early and copious bleeding is of the greatest importance. It ought to be carried to such an extent as to produce a tendency to faint. It may be repeated two, three, or four times to a smaller extent at intervals, when the pain and difficulty of breathing return: or, if the strength of the patient will not permit this, leeches to the number of twenty, thirty, or forty, should be applied over the part where the pain is felt. In treating this disease in infants, leeches alone can be used, for the sake of abstracting blood; and they should be applied over the breast-bone, or on the feet, in order that the bleeding may be readily stemmed, by means of a compress and bandage.

Bleeding is to be accompanied by the use of tartar emetic; of which doses of half a grain, one, two, or three grains in water, must be given every two or three hours. Great benefit has resulted from the use of this medicine in this disease, and it has been given advantageously even in larger doses than those mentioned, without causing any sickness after the first or second dose. Purgatives of calomel, or frequent small doses of calomel combined with a small proportion of opium, are also of great service. The application of blisters in the neighbourhood of the affected part, are useful in the latter stages; and tonics and stimulants during convalescence, will assist in the restoration of the patient's strength.

CONSUMPTION. (Page 143, See also Note on Scrofula.)

The terms *Consumption*, *pulmonary consumption*, and *phthisis*, are now generally limited to a disease consisting in the formation of tubercles, or small round, yellowish-grey bodies, which are deposited in various parts of the frame,

but chiefly in the *lungs*. These bodies gradually soften, and give rise, when formed in the lungs, to the spitting up of matter, at first clear and frothy, subsequently mixed with pale yellowish specks, and occasionally with blood; and accompanied with fever, night-sweats, and emaciation.

Consumption is peculiar to no age nor country, and it has been calculated that one fourth of the deaths, from disease, in Great Britain and Ireland, and one fifth of the deaths in the whole temperate regions of Europe and America, arise from this fatal malady.

Causes.—This disease is unquestionably hereditary. Sometimes, when both parents are at the time labouring under it, the child may be affected at its birth. More frequently the infant is born in a state of debility, from which it most readily falls into this disease from slight causes. Still more frequently the offspring inherit merely the predisposition to this disease, which is excited by various causes, and may cut off the persons in early life, or during the changes which the body undergoes during its transition from boyhood to manhood.

Dyspepsia is believed to be, in very many instances, a cause which predisposes to this disease.

To the causes enumerated by Dr Buchan, may be added improper diet, consisting either in imperfect nourishment, or excessive indulgence in stimulating food; especially when one of these causes is combined with exposure to cold or damp, and residence in ill-ventilated houses.

Masons, and knife, scissor, and fork-grinders, &c. who are exposed in their respective occupations to an atmosphere containing a large quantity of minute particles of sand or iron in it, are especially liable to consumptions and other diseases of the lungs, from inhaling air thus vitiated.

Consumption is also apt to occur, in persons predisposed to it, after various other diseases, such as fever; eruptive fevers, particularly measles, small pox, and scarlet fever; to these may perhaps be added bronchitis or catarrh.

Consumption is not now believed to be infectious: it would be obviously improper, however, for various reasons, to allow a person to sleep with one labouring under consumption in its advanced state.

Symptoms.—One of the first indications of approaching

phthisis is very often a slight shortness of breath, or hurried breathing, especially when the person reads, or speaks continuously. Often the first warning of approaching consumption is the coughing up of some blood. More frequently the first symptom, or one which sooner or later generally succeeds the other, is a cough, at first dry and tickling, but after some weeks, or even months, accompanied with a clear frothy expectoration; this is soon mixed with opaque specks of white, pale yellow, or greenish matter, and when placed in water, partly sinks, and partly floats. Slight pain is frequently felt, at the commencement of the complaint, about the shoulders and top of the chest, and, as the disease advances, pain in one or both sides is often very severe. A very constant symptom of this disease is the hectic fever. At first chilliness, then slight shivering, succeeded by heat, is experienced in the evenings; which, after a time, is followed by perspirations in the morning, sometimes profuse. To these symptoms, diarrhœa, or looseness of the bowels, is soon added. By these causes the sufferer becomes rapidly emaciated, the hair falls off, the nails become incurvated, the feet swell; slight delirium now occasionally obscures the intellect, hitherto unimpaired, and in a few days death closes the scene.

The stethescope throws much light upon the real nature of the disease in doubtful cases, but experience is necessary for the use of this instrument, or of the ear, in examining the chest.

Treatment.—It may be stated, that the remarks made by Dr Buchan as to the formation of an imposthume, or abscess in the lungs, and its bursting within the lungs, or between the lungs and the walls of the chest, &c. are applicable to the terminations of pneumonia, not to consumption.

Little has been added to our knowledge of the treatment of this disease, of late years; but great advantages have arisen from our more accurate knowledge of the symptoms: it is a disease which may be prevented, but is, certainly, very rarely cured. The great object, therefore, is to avoid the causes of it; to live in a place well ventilated; to avoid damp, cold, fatigue, derangements of the stomach and bowels; to contract strict habits of cleanliness and temperance; to take regular exercise; and above all, where the disease is

dreaded, to be on the alert for the first indications of its approach, so that a sea voyage, a change of climate or occupation, or whatever treatment is most advisable in the circumstances, may be immediately adopted. Young and delicate persons, in whose family this disease has already appeared, should be removed to a warmer climate, at least during the cold seasons, until they have become robust, and have passed that age at which the disease generally first appeared in their friends.

If a dry tickling cough, shortness of breath, pains in the chest, or spitting of blood, comes on, an occasional bleeding to a small extent may relieve the patient. Tartar emetic ointment may be rubbed on the upper part of the chest until an eruption is brought out. Small and frequent doses of digitalis, acetate of lead and opium, or elixir of vitriol, have been found very useful for the spitting of blood. Recently frequent emetics have been highly extolled, as affording a means of warding off a threatened consumption. It is supposed, not without reason, that, if given early enough, they may be the means of expelling the tubercular matter from the lungs. In the advanced stages, the strength must be kept up by a nourishing but mild diet; the cough may be alleviated by an occasional emetic, if the strength can bear it; or by small doses of morphia, syrup of squills, or ipecacuan, or by rubbing the chest with an opiate liniment; the perspirations may be moderated by a cooling diet, by small doses of elixir of vitriol or sulphate of quinine, or sometimes by Dover's powder, which is also useful in checking the diarrhœa; for the latter object opium or chalk may also be given, or an occasional clyster of starch and laudanum.

Whey forms a very excellent, and generally an agreeable drink for the patient. The jelly formed from some mosses, particularly the Iceland moss, is a favourite article of nourishment for the consumptive.

REMITTING FEVER. (Pages 172, and 200.)

This, like *yellow fever*, is chiefly a disease of warm climates, and is very generally rapid and alarming in its progress, and frequently fatal in its effects. When fever as-

sumes the remittent form in this country, or temperate climates, it is generally much more protracted, but at the same time milder in its symptoms. The general rules for the treatment of fevers are applicable to this disease, and the same precautions are necessary as to the attention to be paid to inflammation of particular parts, which must be subdued by general bleeding, if the strength permit; or bleeding by leeches, &c. in the neighbourhood of the part affected. As in all fevers, so in this, bark cannot be administered during the existence of the febrile symptoms, without injury; and can only be useful during the convalescence, or during a complete remission of the fever. There is a fever much more common in this country, to which children under ten or twelve are very subject, which assumes a remittent form, and is known by the name of *Infantile Remittent Fever*, which, as it is not described by Dr Buchan, deserves notice here. It has been also called *worm fever*, and *Butters' remittent fever*, from the name of a gentleman who in 1782 gave one of the first accounts of this disease, and pointed out that worms were by no means its cause, although occasionally they accompanied it.

Symptoms.—This disease, in general, comes on slowly, and appears to arise from derangement of the stomach and bowels. It begins accordingly with costiveness and irregularity of the bowels; fetid breath, loss of appetite, flatulence, change of colour, picking of the nose and lips, and cough. The belly becomes enlarged, and the stools either loose or costive. The pulse is quick, varying from 120 to 160. The child, two or three times in the course of the day, becomes feverish and drowsy; but during the absence of the attacks is wakeful and playful. Sometimes the hot fit comes on only at night; and during sleep, the child moans, and starts, or talks incoherently; this is succeeded by sweating in the morning. The skin, however, is generally dry, and the belly and palms of the hands warm. Pain of the head is often present, and occasionally sickness and vomiting. The urine is orange-coloured and transparent, or deposits a white sediment; the stools are always unnatural, being either very pale, or dark-coloured, slimy, and sometimes frothy. During the progress of these symptoms, the patient loses flesh and strength. The complaint generally lasts for two or three weeks.

TREATMENT.—It is usual to commence the treatment with a dose or two of calomel and rhubarb, or, if the bowels be costive, with jalap or senna. An occasional dose of calomel and antimonial powder given at bed-time is very useful in assisting to improve the appearance of the stools; this object is further promoted by small doses of rhubarb, of two or three grains, given once or twice a day, or oftener: if the stools are very loose, this should be continued, with five or six grains of prepared chalk, and injections of starch. If there is vomiting with the looseness, the chalk may be given with some aromatic, such as the tincture of cardamoms and spirit of peppermint. A weak infusion of some bitter, such as the cascorilla, or very small doses of sulphate of quinine, are very useful in restoring the appetite and tone of the stomach. The diet must be light and nourishing, consisting of sago, arrow-root, rice, and bread and milk, in small quantities, and drinks of gruel, barley-water, and weak broths, such as chicken and beef-tea. The belly, which is in general very large and hard, should be firmly supported with a flannel roller; if pain is complained of, it should be fomented, and it should daily be rubbed, as also the spine, with camphorated oil, or anodyne balsam.

SMALL-POX. (Page 182.)

Peruvian bark cannot with propriety be given unless in the latter stages, when there are symptoms of debility, coldness of the surface, trembling, sloughing sores on the extremities, or profuse suppuration. It, or what is better, the sulphate of quinine, may then be given, assisted with cordial draughts, of camphor julep, ether, wine, or spirits.

There is no way, hitherto discovered, of preventing the pits and scars left by the small-pox. The application of a little cold cream is agreeable, but of no great use; the ointments formerly lauded are useless; the employment of masks is decidedly injurious; and the opening of the pustules, so much recommended by Dr Buchan, is equally inefficacious; neither is it advisable for the other reasons offered by him, for it is not now believed that the secondary fever arises from the absorption of the matter, and the

opening of the pustules cannot therefore relieve or prevent it. It is best kept down by a free circulation of air through the apartment, by gentle laxatives; and if there be delirium and throbbing of the temples, by the application of a few leeches. Pains of the legs are best relieved by warm fomentations. And if the use of bark or quinine is not sufficient to restore the strength, and the healthy condition of the skin, a change of air will be necessary to complete the cure.

INOCULATION, AND VACCINATION. (Page 185, and 508.)

The practice of *inoculation* has been almost entirely superseded by that of *vaccination*, and after an experience of about forty years, during which this practice has been introduced into all quarters of the world, it cannot be doubted that vaccination affords, in a vast majority of cases, a permanent security against small-pox. Where small-pox does attack a person who has been vaccinated, it is almost invariably a mild disease, requiring little or no treatment, and leaving behind it neither pits nor scars, nor injury of the general health.

No one can be excused for neglecting to have his children vaccinated, and thus preventing the ravages of so dreadful a disease, by the use of those simple means which Providence has so kindly placed within the reach of all.

It has been thought, that after a series of years the vaccine matter, originally taken from the cow, loses its preservative powers; this however, from extensive experiments, appears not to be the case; and although, in certain circumstances, it may be advisable to obtain fresh matter directly from the cow, it ought not to be done rashly, for the genuine matter is by no means easily obtained; it would require experiments to determine its efficacy before it could be relied upon; and the matter, when first used, after being taken from the cow, is often the occasion of inflammation and glandular swellings.

It has been alleged, also, that after a certain number of years have elapsed, the preservative influence of the vaccination is lost, and that a person would require to be re-

render the security permanent. The practice of re-vaccination has accordingly been introduced extensively in some continental countries. The security afforded by vaccination certainly seems to be occasionally somewhat lessened by the change from youth to manhood, or by change of climate: and although the security afforded by vaccination against small-pox, in a severe form at least, is, in ordinary circumstances, permanent, it would be very proper to repeat so simple an operation at the age of twelve or fourteen at any period when small-pox was raging with more than usual severity and frequency.

MEASLES. (Page 195.)

Bleeding is seldom practised at the commencement of this disease, unless there be severe pain of the head, high fever, pain in the chest, and great difficulty of breathing. The danger to be chiefly dreaded, is the occurrence of inflammation of the lungs about the eighth or ninth day of the eruption, when it has begun to decline. Should there then be pain, or tightness across the chest, increased on coughing, and a full hard pulse, with a distressing cough, bleeding must be immediately had recourse to, and if the symptoms are not relieved, repeated; or if the strength of the patient will not permit of bleeding from the arm, leeches must be applied, and the treatment proper for pneumonia adopted. If there is pain of head and aversion to light, leeches must be applied to the temples; if pain of the belly, tenderness on pressure, and looseness, leeches and blisters may be required to subdue the inflammation there. Although in a majority of instances this disease is a mild one, yet it requires great care and watching, for the most flattering cases may be rapidly converted into the most dangerous, from the occurrence of inflammation. In this disease the use of the stethescope is of great importance, as the physician may thereby detect an inflammation of the lungs, which, in the cough and hurried breathing which generally accompany measles, might escape notice, until it was too late.

SCARLET FEVER. (Page 199.)

The description given of Scarlet Fever by Dr Buchan is not applicable to the disease now known under that name. It is applicable only to the mildest forms of it; and the reader will find the worst, or *malignant* scarlet fever, described in pages 219 and 220, under the name of *malignant Quinsey*, or *putrid ulcerous sore throat.* In this form the disease is very fatal. The scarlet eruption is less distinct, and often disappears suddenly, or becomes of a dark livid hue, and is sometimes interspersed with dark purple spots, or petechiæ. The throat is swollen and of a dark red hue, covered with tough whitish phlegm or ash-coloured spots, surrounded with a livid colour; ulcerations form under these spots, and spread rapidly over the throat, and roof of the mouth. The glands of the neck inflame and swell, and frequently suppurate.

The great object in the treatment of the severe forms of scarlet fever, is to subdue the inflammation of the throat by active means at the outset of the disease; if this is not done promptly, the inflammation soon gets beyond control, while at the same time, the strength of the patient sinks so rapidly that active measures are no longer admissible. If, then, there is much swelling of the throat, or tenderness and swelling of the glands of the neck immediately behind the jaw, leeches should be immediately applied in that place, and the bleeding from the leech-bites encouraged by warm fomentations and poultices. Blood may be drawn from the arm if the fever be high, and the strength of the patient able to bear it; or the patient may be cupped on the back of the neck. To these means must be added the inhalation of the vapour of warm water, gargles of diluted sulphuric acid, or infusion of cayenne pepper, tinctures of myrrh or of camphor, with water. It may be necessary to apply leeches a second time. Great relief is experienced from repeatedly spongingthe body with cold water when the skin is dry and hot. The bowels are also to be kept fully open with calomel and rhubarb followed by jalap, salts, or senna.

In some seasons when scarlet fever is prevalent, the eruption and fever rapidly decline, and great debility and sinking, with gangrenous ulceration of the throat, fetid breath,

blackness of the tongue and lips, and irritating discharges from the nostrils, are the most prominent symptoms. In such cases bleeding is only applicable in the very outset, and leeches only can be used. When the debility comes on, wine must be given pretty freely, accompanied with small doses of sulphate of quinine, with diluted sulphuric acid and water.

The abscesses in the neck, inflammations of the eyes, coughs, and discharges from the ear, when they succeed this fever, as they frequently do, are to be treated according to the general rules elsewhere laid down for the treatment of these affections. Dropsical swelling is a very common sequence of scarlatina, especially of the milder forms of it. If the fever is great, bleeding must be had recourse to; in the case of infants and young children, leeches being applied to the feet or legs. These means are to be followed by free purging, and small doses of cream of tartar, or nitre, or the sweet spirits of nitre; pure air, and a nourishing diet.

ERYSIPELAS. (Page 201.)

When this affection is mild, all that is necessary is cooling remedies and laxatives, and the use of small doses of antimonial wine. When the inflammation of the skin is greater, leeches must be applied, and warm fomentations used; great relief may be obtained by making numerous small punctures with the point of the lancet in preference to leeching. In more severe cases, when the fever is high, especially when the face is attacked, and pain of the head indicates danger of the brain, general blood-letting is indispensable before using the other remedies already mentioned. When the inflammation attacks a limb, and deep-seated suppuration takes place, extensive incisions require to be made by the surgeon; the limb should also be surrounded by a line formed by rubbing it with the lunar caustic a little above the inflamed part, which prevents the disease extending towards the body. The incisions must be poulticed, and if the suppuration is great, the strength must be supported by cordials. If gangrene takes place, bark and wine must be freely administered.

PHRENITIS, OR INFLAMMATION OF THE BRAIN. (Pages 205. and 448.)

Many of what are called the symptoms of this disease, may arise from other causes besides inflammation of the brain; headache, vomiting, and fever, for example, are common symptoms, especially in children, of derangements of the stomach and bowels; it requires therefore an accurate knowledge of the symptoms of phrenitis, lest this highly dangerous malady should be mistaken for some trivial ailment. This disease, also, may be combined with many other affections, such as fever, scarlatina, measles, &c., or it may follow accidents, and in each case it requires its appropriate treatment. Again, *Water in the Head* is one of the results of this disease, a very common, and very fatal one in children; and it is only by active treatment in the first stage that this effusion of water can be prevented, which, when once formed, is generally incurable. For all these reasons, the symptoms of this disease should be well known, that timely warning may be taken, and proper advice or active treatment adopted.

Symptoms.—In the *Head*,—pain, generally worst in the evening, and aggravated by noise, coughing, standing erect, stooping, or shaking the head; throbbing and giddiness, ringing in the ears, sense of weight, stupor, or propensity to sleep. In the child the head is often moved from side to side. In the *Eye*,—great brightness at first, with impatience of light, and contracted pupil, followed often by squinting, dilated pupil, double vision, blindness, and a half shut gaping eye. In the *Ear*,—unusual acuteness of hearing, singing noise, transient deafness. *Speech*, indistinct, quick or very slow. *Pulse*, either remarkably slow, or quick, and very variable. *Mind* incoherent, forgetful, peevish and irritable, or in a state of high delirium. There is wakefulness in the first stage generally, and drowsiness in the latter stage, passing into stupor and insensibility. The limbs are spasmodically twitched and convulsed, or paralysed. Frequent sighing, starting suddenly, or screaming; vomiting, and obstinate constipation of the bowels, are all occasional signs of this affection. Effusion of fluid within the brain is indicated by dilatation and immobility of the pupil, squinting, insensibility, difficulty of swallowing, palsy of the

upper eyelids, or of one side of the body, starting of the tendons, and great prostration of strength, the patient generally lying on his back, utterly unconscious and insensible.

TREATMENT.—The precautionary measures recommended by Dr Buchan under the heads regimen, and medicine, are highly important. The approach of an inflammation of the brain, may be indicated by headache, giddiness, intolerance of light, and sighing; or in children by a slight cast or rolling of the eyes, startings, spasmodic breathing during sleep, headache and vomiting:—if these symptoms are not removed by purging and bathing the feet, leeches should be applied to the temples, or, which is perhaps better, to the feet, especially in children, and the bleeding encouraged by a warm foot bath. The hair should be cut short, and the head frequently bathed with cold water; and if the symptoms persevere, a blister or seton should be applied to the back of the neck, and purgatives given daily.

If an attack of inflammation is fairly formed, the patient must be bled freely and purged, the head shaved, and iced water, or pounded ice and water in a bladder, applied constantly to the head. The feet at the same time must be kept warm, or bathed in hot water. If the pain, fever, and excitement are not relieved by the first bleeding, a second or third must be had recourse to, or leeches or cupping may be tried. Purgatives of calomel combined with jalap, scammony, and followed by infusion of senna and salts, are to be given; these means are to be accompanied with repeated doses of antimonial wine, so as to keep up a degree of nausea or perspiration. If the disease is not subdued by this treatment, but passes into a state of oppression, blisters must be applied, in succession, to the back of the neck and head, between the shoulders, or to the legs or feet, while at the same time the cold applications to the head, and the purgatives, are continued. If the insensibility continues, or increases, a large blister must be applied to the head. Gruel, arrow-root, sago, and barley-water are to form the diet at the commencement, and in the latter stages it may be necessary to support the strength by the addition of some wine. In a disease of this importance, the advice of a skilful medical adviser is of essential importance.

OPHTHALMIA. (Page 209.)

The treatment recommended by Dr Buchan is more particularly applicable to the severe form of inflammation of the eyes, with fever, and great pain and redness of the parts. When the pain and fever are subdued, the inflammation is said to be in a *chronic* state; in this state it may have existed almost from the commencement, or may continue for a length of time with great obstinacy, especially in persons of a scrofulous habit of body. In this state lotions are very useful; of these one of the best is formed by dissolving white vitriol (sulphate of zinc) in water, or rose water, in the proportion of two grains to the ounce. The eye must be washed with this frequently, allowing a drop or two to enter the eye each time. Great benefit often arises, also, from dropping a little of the wine of opium daily into the eye. Along with these means, blisters on the back of the neck, or behind the ears, must be used; and purgatives occasionally administered. The golden ointment, and the ointment of the red precipitate, (or oxide of mercury,) are also valuable remedies in these cases; especially when there is thickening and redness of the eyelids, which are glued together in the mornings:—in such cases a small quantity of the ointment should be inserted along the inner edges of the eyelids, with a feather or hair pencil, every night. To these means may be added a generous diet, bark and wine, removal from damp or exposed situations, and in protracted cases a change of air.

Opacities on the surface of the eye, left by an attack of inflammation, may be sometimes removed by the continued use of astringent lotions of sulphate of zinc or copper, or the vinum opii dropped into the eye.

COLDS AND COMMON COUGHS, (pp. 223 and 226.)

Under these terms may be included what is now understood by medical writers under the names of *Catarrh* or *Bronchitis*.

Bronchitis is either acute, or chronic.

Acute, when it attacks the patient with some degree of fever; beginning generally with what is called a cold in the

head, or with soreness of the throat; extending next to the windpipe, and then to the air tubes of the lungs, giving rise to a sense of tightness or oppression across the chest, or pain, or soreness, increased on coughing. The spittle is at first tough and transparent, but as the disease gets better, it becomes whitish, thicker, and more abundant. The cough and expectoration then gradually diminish, and with them the fever and difficulty of breathing.

Chronic bronchitis is a continuance of the latter stage of the acute form. It is often a result of other diseases, such as fever, measles, &c. and may continue for many years;—in some cases being cso slight as to occasion only a trifling ough, and the spitting up of as mall quantity of greenish white matter, chiefly in the mornings; in others the cough is more constant, and the expectoration greater in quantity; and in other cases the cough, difficulty of breathing, especially at night, and quantity of expectoration, may be so great as to be accompanied with fever, night sweats, and gradual emaciation.

Treatment.—In slight cases a purgative, warm foot bath, and a small dose of antimonial wine or James's powder, so as to produce perspiration; an additional blanket and warm drinks, to encourage the sweating; with a day's confinement, are sufficient to remove the complaint.

In more severe cases, where there is much fever, difficulty of breathing, and pain, bleeding or cupping will be required in addition to these means; and frequent doses of antimonial or ipecacuan wine: after the severity of the fever is somewhat abated, a blister may be applied to the chest, or tartar emetic ointment rubbed on it so as to produce an eruption. Syrup of squills, with paregoric, and ipecacuan wine in small doses, may then be given to relieve the cough.

In chronic bronchitis, the last mentioned expectorants may be given. The repeated application of blisters, or of the tartar emetic ointment to the breast, will be necessary in severe and protracted cases; morphia lozenges may be used for allaying an irritating cough, or small doses of ipecacuan, or ipecacuanha lozenges, to promote the expectoration when the cough is dry and bound. With these means must be combined remedies calculated to strengthen the stomach and regulate the bowels.

Persons subject to coughs, ought to sponge the chest daily with salt water, or vinegar and water; or if robust enough, use the shower-bath; by which means they may escape many attacks.

No cause of colds is more frequent than that of *sitting in wet stockings and shoes*; or allowing wet clothes to *dry on the body.*

In addition to the causes enumerated by Dr Buchan as giving rise to coughs, may be mentioned disease of the liver, and various diseases of the heart. In these cases the disease, of which the cough is only a symptom, must be put under its appropriate treatment.

INFLAMMATION OF THE STOMACH, (Page 233.)

Or Gastritis, in the *acute* form described by Dr Buchan, is most commonly the effect of some corrosive poison having been swallowed. (See Poisons, and note thereon.)

In addition to the symptoms mentioned, there is generally great tenderness over the stomach, so that the slightest touch or movement, or even the weight of the bed-clothes, produces great distress. This is perhaps the most characteristic and certain sign of Gastritis.

Bleeding is advisable in robust persons at the commencement of the disease; but the best remedy is the application of leeches; from twenty to forty should be applied over the stomach of an adult, four or six to a child. Warm fomentations and poultices should then be applied; and if the tenderness is not decidedly relieved, leeches must again be applied. Cold drinks are now preferred, by most medical men, to warm. Blisters may be applied after the leeches, if the disease is not entirely subdued.

Much more frequently this disease attacks the patient in a less severe but more protracted form; it is then called *chronic.* It is characterized by the symptoms of indigestion, or dyspepsia, and is often mistaken for it, and the sufferings and disease aggravated by purgatives, tonics, and stimulating diet. The symptoms which chiefly lead to its detection, are *pain* in the region of the stomach, *increased on pressure*; or a sense of tightness or fulness; vomiting, chiefly after eat-

ing; loss of appetite, or occasional craving; constipation, emaciation, accompanied with a jaundiced or sallow appearance of the countenance, and the other symptoms of indigestion. If this disease is taken for mere derangement of the functions of the stomach, which it frequently is, and tonics and purgatives given, much injury may be done, although temporary relief may occasionally be obtained from a purgative, or some carminative mixture.

The diet ought to be restricted for a length of time to farinaceous food, and light and soothing articles; all stimulating food being prohibited. A small number of leeches may be repeatedly applied to the pit of the stomach at intervals. A succession of blisters, or rubbing in the tartar emetic ointment, will then most likely prove of great benefit. The bowels must be kept open with injections. After the most urgent symptoms are subdued by these means, and mere weakness of the stomach remains, tonics may be given with propriety and advantage, but not till then.

INFLAMMATION OF THE INTESTINES.

(Page 235.)
COLIC. (Page 238.) DYSENTERY. (Page 277.)

The description given by Dr Buchan, of inflammation of the intestines, is more particularly applicable to ileus, or the ileac passion, an affection which exactly resembles severe colic; with this difference, that it occupies a different portion of the bowels, the one affecting the small, the other the large intestines.

(1.) *Ileus* and *Colic* are chiefly distinguished from inflammation by the fact, that the pain is, at first, generally relieved, rather than increased, by pressure. The pain, also, comes in paroxysms, and is of a wringing or twisting character. These symptoms are usually attended with vomiting, and obstinate constipation. The pulse is at first slow or natural, but becomes quick, and the skin hot, if the disease proceeds towards inflammation.

TREATMENT.—Mild cases depending on flatulence, &c. may be relieved by carminatives and purgatives; but in severe cases the patient must be bled. Hot fomentations,

and laudanum, or turpentine, should be applied to the abdomen. Purgatives must be administered with caution, for although the great object is to get the bowels open, yet purgatives will in general either be rejected by vomiting, or, if they are violent, they may increase the irritation and cause inflammation. Six grains of Dover's powder, with three grains of calomel, may be given every two or three hours, and after three or four doses may be followed by castor-oil, to which twenty or thirty drops of laudanum may be added if the vomiting is still urgent. Injections are of great service; and castor-oil, or senna and salts, may be given in this manner: and if these means fail in producing a free motion, an infusion of 15 grains of tobacco may be given in an injection, and repeated once or twice at intervals of an hour. Throwing up a *large quantity* of water into the bowels, is often sufficient to excite their action.

(2.) *Peritonitis*, is always a dangerous disease, especially when it attacks women in child-bed, as it often does. It is an inflammation of the smooth shining membrane which *covers* the bowels, and lines the abdomen.

Symptoms.—Shivering followed by heat of skin, and frequent hard pulse, with sharp cutting pain in some part of the abdomen; this pain is generally constant, and is aggravated by moving, coughing, and the slightest pressure on the affected part; and by this circumstance it is most easily distinguished from the affection last mentioned, and the one next described. The belly is tumid, the bowels generally, but not always costive. There are also, frequently, hiccup, sickness, and vomiting.

Treatment.—Copious and early blood-letting is the great remedy. This should be followed, if the pain and fever continue, and the strength permits, by one or two small bleedings at intervals of some hours. After the first bleeding five grains of calomel should be given, hot fomentations applied to the abdomen, followed by leeches; and after another dose or two of calomel, an injection, or dose of castor-oil, should be administered. Injections are preferable, as purgatives are apt to increase the disease by increasing the movements of the bowels, and thus causing the inflamed surfaces to rub against each other. Effervescing drinks may be given to check the vomiting. After bleeding has been carried as far as the strength of the pa-

tient, or the urgency of the symptoms, will justify, one or two grains of opium, or forty drops of laudanum, may be given, if the person is an adult, and hot fomentations continued to the belly. If the pain and tenderness are still present, hot cloths sprinkled with turpentine, or a blister, may then be applied.

Light farinaceous diet in small quantities, and barley water, alone can be given at first ; but if the strength begins to sink, wine must be used, with beef-tea injections.

In a disease so formidable as this, medical assistance is indispensable, if it can be obtained.

(3.) *Enteritis*, is an inflammation of the *inner* or *lining* membrane of the small intestines. The same disease affecting the large intestines is called Dysentery, and is described at pages 277, and 278, &c.

Symptoms.—Enteritis is characterized by fever, thirst, occasionally vomiting ; generally *looseness* of the bowels, distinguishing this from the former affections, from which it is further distinguished by the pain, which, unlike that of colic and ileus, is increased on firm pressure, and, unlike that of peritonitis, is much less severe, and bears pressure more readily.

This affection is common in children, and is too often mistaken for worms, or simple diarrhœa.

The treatment is similar to that of the last affection, but seldom requires to be so urgent. Blood may be taken from the arm if the strength will bear it, and the fever is high. Leeches must be applied to the belly. In children they may be applied on the feet. Warm fomentations are next to be used, and the leeches to be re-applied if pain and tenderness remain. A blister may then be put on, if the vomiting or looseness continues. Small doses of chalk and Dover's powder are to be administered at the same time ; but the latter must not be given to infants, unless under the direction of a medical man, as it contains opium. The diet must be very light, and in small quantity.

(4.) Dysentery. Page 277.—Upon an attack of this disease, the first thing to be done is to apply leeches to the part where the pain is felt, followed by hot fomentations and the warm bath. The leeches may be applied a second or third time, if there be fixed pain, increased on pressure, still felt in the abdomen. With these means a dose of

castor oil may be conjoined, to clear out the bowels : but the indiscriminate or continued use of purgatives is injurious. Dover's powder is a very useful medicine in this disease, and may be given in doses of from five to ten grains every three hours. It may be combined with a grain or two of calomel, or six or eight grains of the powder of mercury and chalk. The straining is best relieved by emollient clysters, to which laudanum may be added. Drinking lime water, infusions of bitter medicines, and astringents, such as kino, catechu, quassia, cusparia, logwood, &c., will be found of great benefit in curing protracted cases.

The abdomen should be swathed in flannel, and well rubbed two or three times a day ; and a blister occasionally applied if the disease is obstinate. The diet must be moderate in quantity, and light ; animal food being prohibited.

CHOLERA MORBUS. (Page 249.)

The treatment recommended for the *Common Cholera* described by Dr Buchan, is applicable, perhaps, only to the mildest cases. In more urgent cases, instead of wasting time in encouraging the vomiting and purging with gruel and broths, one or two grains of opium, or from thirty to sixty drops of laudanum, should be given every second hour until relief is obtained. Bottles of hot water, or warm bricks, should be applied to the extremities and belly ; or hot fomentations followed by a mustard sinapism or blister over the abdomen, if the vomiting and purging continue. If there is great feebleness and coldness, brandy or other cordials must be given ; and after the irritability of the stomach has gone off, beef-tea, wine, and nourishing food, must be given to restore the strength.

If inflammation (enteritis) should occur as a consequence of this disease, and be indicated by fever, pain on pressure, great thirst, and glazed tongue, leeches must be applied, and the other treatment for this disease adopted.

Malignant or Epidemic Cholera, is a disease precisely similar in character, but much more alarming in its symptoms, rapidity, and fatality, than common cholera. It is often preceded by lassitude, nausea, and purging ; the individual is then suddenly seized, generally during the night, with

violent vomiting and purging, accompanied with pain and cramps, or spasms. The matter discharged by vomiting and purging is at first bilious or fecal; it then becomes watery, thin, and copious, resembling rice or barley-water. The urine is suppressed. The pulse feeble and frequent, and the skin cold. As the vomiting and spasms subside, the pulse becomes scarcely perceptible, the extremities icy cold, the skin of a blue colour, the voice feeble and husky. The coldness and prostration of strength are very great; but the mind generally remains unimpaired to the last. Should the patient survive, fever, of greater or less intensity, will most probably succeed, accompanied with some degree of pain and tenderness of the belly, or with pain of head, followed by oppression, or insensibility. This fever may last for eight or ten days.

TREATMENT.—When cholera is prevalent, the slightest indication of its approach should be watched. If there is nausea and headache, a vomit should be given, followed by one or two small doses of rhubarb. If diarrhœa comes on, a few grains of calomel and one or two of opium should be taken, followed by a blister on the abdomen, and chalk with Dover's powder; if the looseness continues, these means, with a dose of castor oil, will generally succeed in cutting short the disease.

If more urgent symptoms have come on, it is recommended that blood should be drawn, provided the cold stage is not formed, and free vomiting excited by a spoonful of mustard. Bottles of hot water, or bags of hot sand, salt or bran, must next be applied to the feet, back, and stomach. The parts affected with spasm are to be rubbed with the hand. A large dose of calomel, capsicum, and opium, should at the same time be given; mustard sinapisms may then be applied to the stomach and spine, if the pain and vomiting continue. If coldness and collapse come on, the hot applications must be persevered in; and brandy and water, or small doses of mustard, carbonate of ammonia, or turpentine, frequently administered. Calomel and opium, are also to be repeated at intervals. An injection of warm water with three or four glasses of brandy and a tea spoonful or two of laudanum, may be administered with great benefit in extreme cases, where the collapse is great.

The succeeding fever must be treated according to general principles, leeches, followed by blisters, being applied to the head or stomach, if these parts are affected, and the strength being supported by light diet and a moderate allowance of wine.

DIARRHŒA. (Page 251.)

The great objects to be attended to in the treatment of this disease are, to remove any sources of irritation, whether in the diet, or in accumulations in the bowels, if the diarrhœa arises from these causes. These ends are attained by a very spare diet, consisting of barley-water, sago, arrow-root, or carefully strained gruel; and if there is any accumulation suspected, or if there has been a repletion, a vomit and a dose of castor oil. If there is fixed pain, increased on pressure, leeches and warm fomentations must be applied. If distressing griping and straining, a small clyster of starch and a tea spoonful of laudanum, thrown up the bowels occasionally, will give great relief. Hot flannel, or bags of hot bran, may be applied to the abdomen. If the looseness continues, astringent remedies must be used. Of these, chalk julep, with the addition of some tincture of kino or catechu, and a few drops of laudanum in obstinate cases, may be given after every loose motion. Lime water and milk may be given as a drink to the patient. Flannel should be worn next the skin; and a flannel bandage round the abdomen.

Prepared chalk is a very useful and safe medicine in the diarrhœa of children, four or five grains of it may be given to them five or six times a day; it may be combined with a grain or two of rhubarb and a little cinnamon. To the adult ten or twelve grains, or more, may be given as often; and if necessary, five or six grains of Dover's powder may be added.

A convenient mixture is as follows:

Prepared chalk, two drachms;
Electuary of Catechu, two drachms,
To be rubbed up carefully with six ounces of water, gradually added.

Of this a table-spoonful may be taken after every loose motion. If necessary, one or two drachms of laudanum may

be added to the mixture. From half an ounce to an ounce of the tincture of catechu, or tincture of kino, with an equal quantity of the tincture of cinnamon, may be put in the mixture, instead of the Electuary.

Astringent medicines, such as these, are not to be indiscriminately employed, otherwise much injury may be done. They are chiefly useful in diarrhœa arising from debility, or in protracted, or habitual attacks, after proper means have been adopted for removing the exciting cause, unloading the bowels, or subduing any irritability, or inflammatory affection of the lining membrane of the bowels, by appropriate remedies.

INCONTINENCE OF URINE, (Page 258.),

May arise from irritability of the bladder, caused by the pressure of neighbouring organs, such as the womb during pregnancy; or by the presence of worms in the rectum, which must be removed to effect a cure; or an inflammatory or irritable state of the bladder itself; in which case, if there is pain in the lower part of the belly, increased on pressure, leeches must be applied, followed by warm fomentations; injections containing laudanum may also be administered occasionally with advantage.

Inability to retain the urine very often arises, especially in aged persons, from debility, or from palsy of the muscular fibres surrounding the bladder; in such cases, rubbing with the hand only, or with stimulating liniments, on the lower bone of the spine, or cold bathing, and repeated blisters, may be had recourse to. Cures have occasionally been effected by sprinkling a minute quantity of strychnia on a blistered surface, or giving it internally. It is, however, an active poison in very small doses, and ought invariably to be prescribed by a medical man.

In children this affection is sometimes troublesome, especially at night; in many cases it arises from indolence; and in such, a little instruction as to the importance of cleanliness, or, if necessary, a little salutary chastisement, will effect a cure. Failing this, mechanical means may be used to prevent the offence being repeated, which, continued for a short time, generally produces a cure. If sleep is very

profound, a common cause, light suppers, or none at all and light clothing, should be added to the cautions given.

In incurable cases, a bladder or other mechanical contrivance must be constantly worn.

GRAVEL AND STONE. (Page 260.)

The search for a substance which, taken into the stomach, would dissolve a stone in the bladder, has long since been relinquished, as equally futile with the search for the philosopher's stone, or the elixir vitæ. Few substances pass from the stomach into the bladder; and any chemical agent powerful enough to dissolve the stone, would in the first place be more likely to dissolve the stomach itself, and cause immediate death. When a stone is once formed in the bladder, the only remedy is its removal. Methods have been invented, of late years, for breaking down the stone into small fragments, which may pass away with the urine; but most surgeons are agreed, that in nine cases out of ten, the safest, easiest, and most effective treatment, is to cut into the bladder, and remove the stone entire.

When a person labours under gravel, or a tendency to the formation of a stone in the kidney or bladder, as indicated by fits of gravel, or a sandy sediment in his urine, he ought, if the sediment is reddish or brown, to use magnesia or soda water daily, or drink plentifully of lime water, or take ten drops of the solution of potass in a little water or broth, two or three times a-day; or pills of hard soap to the extent of ten grains twice a-day: by these means the acidity may be corrected in time, and the sediment disappear. The food should at the same time be light and nourishing, and acids or acid wines avoided. If the sediment, on the other hand, is white, acids are recommended; and of these, spirit of salt, or muriatic acid, is generally preferred, of which five drops, in a wine glassful of water, may be taken twice or thrice daily.

When the pain is violent, hot fomentations, the warm bath, and an opiate, or if necessary leeches, are to be had recourse to for relief.

BLEEDING AT THE NOSE. (Pages 269.)

In addition to the means enumerated for stopping an alarming discharge of blood from the nose, the application of cold ought not to be admitted. Sprinkling, or dashing cold water on the face, applying cold wet cloths on the head, exposing the face to a current of cold air, are all valuable remedies. Dipping the head into a pail of iced water, or salt and water, has had the desired effect when all other attempts had failed.

Astringent solutions of alum, sulphuric acid, white or blue vitriol, alum, or tincture of the muriate of iron, may be thrown into the nostrils with a syringe. A probe, or wire, wrapped round with a fold or two of lint, may be pushed along the nostril, and the wire then withdrawn, leaving the lint in the passage.

SPITTING AND VOMITING OF BLOOD. (Pages 272, 275.)

If the discharge of blood is alarming from the quantity which continues to be expelled, bleeding will be indispensable in most cases. When the blood is *coughed* up, a blister may be required, if there is difficulty or oppression of breathing. When the blood is *vomited*, cold drinks should be freely administered. Acidulated drinks should be given, cooled down by ice, or by a freezing mixture.

In cases where the discharge of blood is less active, and is only expelled occasionally, in comparatively small quantities, a valuable remedy is the sugar of lead, (acetate of lead,) which may be given in doses of two grains, with a quarter or half a grain of opium, every three or four hours. With these means, laxatives and tonics are to be combined; free ventilation, and sponging the chest with vinegar and water.

TOOTH-ACHE. (Page 286.)

Creosote has been lately much extolled for the cure of tooth-ache; like opium, and laudanum, it affords tempo-

rary relief; and that too more effectually than most other remedies, when properly applied. A hair pencil, or a small piece of lint, made into a roll with a fine point, should be dipped in it, and then inserted into the hole in the tooth.

The great objects to be attended to in the preservation of the teeth, are, first to take care that they grow in properly, for if they are too closely set, the teeth most pressed upon are very apt to decay. The teeth should therefore be examined by a dentist, who, by extracting, if necessary, an irregular tooth when the jaw is too full, will thus preserve the rest.

The next thing to be attended to, for their preservation, is cleanliness. Food should never be allowed to stick between the teeth, and decay in the mouth. The teeth should be brushed every night, or night and morning; a little tooth powder should be used occasionally; fine charcoal, or prepared chalk, to which a little powdered myrrh and camphor may be added, especially if the gums are soft and spongy.

The stomach also must be kept in good order; no more frequent cause of tooth-ache exists, than derangement of the stomach.

Lastly, whenever a tooth begins to decay, it should be stuffed by a dentist: if this is done in time, before the hole is grown large, or rather, before pain has been felt, the further decay of the tooth may be prevented.

EAR-ACHE. (Page 289.)

Inflammation of the internal ear is very dangerous, from the risk of its extending to the brain. If there is acute pain, therefore, noises in the ear, and fever, after bleeding from the arm or jugular vein, leeches must be applied below and behind the ear, and a strong purgative given. The leeches must be re-applied once or twice at intervals of six hours, if the pain does not subside. Calomel, and jalap, or senna and salts, should at the same time be given, and a blister applied to the nape of the neck.

Such attacks very commonly end in a discharge of matter from the ear. This matter is very apt to lodge in the ear, and give rise to a veryoff ensive discharge, and, what is of more consequence, disease of the bones of the ear, which

gradually extends inwards, until the membranes of the brain are inflamed, and fatal consequences ensue. The ear, therefore, should be washed out daily with injections of milk and water, slightly warm. If the discharge continues, one grain, or two, of white vitriol may be gradually added to each ounce of the injection. A piece of cotton should also be worn in the ear, for when this discharge is suddenly suppressed by cold or any other cause, acute pain is the consequence. This ought not to be relieved by dropping laudanum, &c. into the ear, but by leeches, or re-establishing the discharge by warm fomentations, and the application of a blister behind the ear.

WORMS. (Page 293.)

The most favourite remedy at the present day, in this country, for the cure of *tape worm*, is the oil of turpentine, which may be given in doses of from half an ounce to two ounces, along with, or followed by, a dose of castor oil. Another medicine much extolled, is the bark of the pomegranate root, which may be given in powder in doses of two scruples every hour, for four or five hours, followed by a purgative; or a decoction of two ounces of the bark may be given. The root of the male fern is also an excellent remedy in some species of tape-worm, but inferior, perhaps, in efficacy to the turpentine; a quarter or half an ounce of the powder may be given, followed by a dose of jalap, scammony, and calomel. These remedies are generally taken in the morning fasting, after a light supper of panado on the previous evening; and ought to be followed in the course of a few hours by an active purgative.

JAUNDICE. (Page 298)

One of the most frequent causes of jaundice is obstruction, by means of a small stone or calculus, of the duct which conveys the bile from the liver to the bowels. The passage of this stone is indicated by shooting pains in the region of the stomach, occurring in paroxysms, and accom-

panied with shiverings, perspirations, and vomiting. A full dose of opium, followed by purgatives of calomel and colocynth, and accompanied by warm fomentations, or the warm bath, are the best means of removing this cause of jaundice, by assisting the passage of the stone into the bowels, and at the same time alleviating the pain caused by its passage.

Jaundice may also be caused by a loaded state of the bowels, which by their pressure may obstruct the passage of the bile. This form of jaundice is to be removed by the use of purgatives and injections.

Jaundice may be caused by an inflammatory state of the liver, or of the neighbouring bowels; indicated by pain, increased on pressure, vomiting some hours after food, and febrile symptoms. In this state bleeding, leeches, or cupping over the liver, followed by blisters and laxatives accompanied by fomentations, are the means of the cure.

Jaundice may arise from hardening and alteration of the structure of the liver, and tumours in its neighbourhood; such cases are generally incurable.

DROPSY. (Page 301.)

Dropsical swelling may result from many different causes, requiring very different modes of treatment.

It may be the effect of an inflammatory state of the body, accompanied with fever, and difficulty of breathing, and requiring for its cure bleeding, purging, and diuretic medicine.

It may result from debility, requiring for its treatment nourishing diet, cordials, gentle exercise, and mild laxatives and diuretics.

It often accompanies or follows eruptive fevers, such as scarlatina and measles, (*see scarlet fever*) and in these cases generally requires bleeding or leeching, active purgatives and diuretics.

It may be a consequence of suppression or irregularity of the menses, and must be treated accordingly, by giving laxatives of aloes, accompanied with myrrh and the sulphate of iron; enjoining exercise, and if possible, change of air.

Dropsy may be the effect of disease of the lungs ; swelling of the legs is common towards the termination of consumption. A protracted bronchitis is a common cause. Other diseases within the chest may also give rise to dropsy, such as chronic pleurisy, or water in the chest. In these cases, in addition to the dropsy there is cough, and difficulty of breathing, which is, indeed, commonly the most distressing symptom, obliging the patient in many cases constantly to sit up in bed, or lean forward on his knees, by night and day.

Disease of the liver very often gives rise to dropsy. Another occasional cause is disease of the womb. But, perhaps, the most frequent cause of any is disease of the kidneys. In almost every case of dropsy, but especially when it results from the last-mentioned cause, the urine is scanty and high coloured. If there be fever, bleeding must be had recourse to, and active purgatives. If there is pain across the loins, leeches must be applied there, and repeated if the pain continues. In most cases purgatives are of service, especially those which cause copious, watery stools, such as jalap, gambouge, scammony, &c. ; but these must be given with caution if there is much debility present.

Diuretics, or medicines which increase the flow of urine, are of great service in a majority of instances. Of these the following may be mentioned ; cream of tartar, which ought to be given in small quantities at a time, in order to obtain its diuretic effect. Tincture of squills, acetate of potass, sweet spirits of nitre, gin, wine or tincture of colchicum, and the powder, tincture, or infusion of digitalis, are the most useful medicines of this kind. One of these may act when the others fail, or a combination may succeed when each individually has been found ineffectual. The first three, for example, may be given together, in water ; the squills in doses of fifteen or thirty drops ; the acetate of potass in doses of fifteen grains, and the other in doses of a drachm or a tea-spoonful. The two latter medicines are very active, and ought always to be given under the directions of a medical man. Digitalis has been found of great service, especially in cases depending upon disease of the heart. In all cases where such medicines are given, the body must be kept cool, if possible the person should be out of bed ; drinks should be given freely at the same time ;

and after the desired end has been attained, tonic medicines should be given to restore the strength, and prevent the recurrence of the disease.

GOUT. (Page 305.)

Gout is not more incurable than other diseases of equal severity. Although in many instances a hereditary disease, in nine cases out of ten the immediate causes of it are indolence and high feeding. And perhaps, the only reason that it has ever been thought unamenable to remedies, or an opprobrium to medical science, is that the subjects of it prefer that treatment which is most likely to keep up the disposition to it, and expose them to a constant renewal of its attacks. It is an inflammatory affection of certain parts of the body, chiefly the joints, the result most commonly of a plethora brought on by ease and indulgence; and, like other inflammatory affections, requires similar treatment; not wine and cordials. It is an old saying and a true one, that no one would be much troubled with gout if he would *live on sixpence a day and earn it.* Following general principles, then, the best authorities agree that the proper treatment for an attack of this disease is to bleed freely if there is fever; to give antimonials and purges of calomel and jalap, or salts; when the excitement is subdued by these means, leeches should be applied to the affected joint; if there is much pain, redness, and swelling, warm fomentations are also useful. A medicine, highly extolled for the cure of gout, is colchicum, of which from one to two drachms of the wine or tincture may be given at night, and repeated in the morning if free purging is not produced. This dose is to be given on the accession of an attack, after bleeding, if necessary; and doses of twenty drops or half a drachm, may be given three times a day, during the continuance of the fit; combined occasionally with salts or other aperients.

Persons subject to gout ought to abstain most rigidly from all stimulants, and live on a moderate allowance of plain food, using at the same time plenty of active exercise in the open air.

RHEUMATISM. (Page 311.)

Colchicum has also been found of great service in the cure of rheumatism, after the fever has been subdued by bloodletting. Another remedy in vogue, for this disease, is Dover's powder, given in doses of eight or ten grains, repeated at intervals as to produce and keep up copious perspiration.

SCROFULA. (Page 319.) See also Note on Consumption.

This name is applied to that constitution in which there is a tendency to the formation of a soft, brittle, curdy-looking matter, by medical writers named *tubercle*. This tuberculous matter may be deposited in almost any part of the body. It is, however, most frequently formed, perhaps, in the lungs, giving rise to *consumption*. It is also very frequently formed in the bowels, giving rise to diarrhœa ; or in the glands of the mesentery, a membrane which supports the bowels. In this situation, the swelling of these numerous glands gives rise to enlargement of the belly ; accompanied with this there is generally diarrhœa and wasting, and the disease is termed *marasmus*. Swelling of the glands of the neck is also very frequent in scrofulous persons, giving rise to the symptoms and appearances described by Dr Buchan. There is in fact almost no region of the body where this deposit may not take place ; in these situations it may collect or slowly inflame and suppurate, causing a train of symptoms, which are modified in their character according to the function of the part affected.

This disease is hereditary. The scrofulous constitution is marked by a very fair complexion, the skin being of a dazzling whiteness, smoothness, and transparency, so that the blue veins beneath it are traced with great distinctness ; the eyes are commonly blue, large, and beaming ; eye-lashes long and shining ; the hair silky and light ; the cheeks present a red patch. The skin is very irritable, so that it suffers much from slight injuries. The stature is in general rather small, but the form is often extremely beautiful. The passions are quick and irritable ; the affections ardent ; and

the imagination generally stronger than the judgement. This is the most marked form presented by persons of this constitution; but no temperament, form, or habit of body, is necessarily exempt from the scrofulous tendency.

Proper air, exercise, diet, and clothing, are the chief preservatives against the developement of this disease. Sea bathing and sea air are also of great value.

The attacks of inflammation in any part of the body must be watched for with care, in persons of this constitution; and subdued at the outset by appropriate remedies, bleeding, cupping, leeching, blisters, and irritating ointment.

The sulphate of quinine is now invariably used instead of the Peruvian bark, where the use of tonics is required.

Iodine is a favourite remedy, at the present day, for the removal of those hard swellings of the glands, which are frequent in this disease. The iodide of potassium is generally used, and may both be given internally and applied externally. In the former case, being given in small doses frequently repeated, for a length of time; for example, from half a grain to one grain in water several times a-day. In the latter case, being made into an ointment and frequently rubbed on the affected part.

ASTHMA. (Page 325.)

There are many diseases of the heart and lungs which give rise to great difficulty of breathing, and symptoms resembling asthma. In some of these bleeding is necessary, in others it would be injurious or even dangerous. To act judiciously in these circumstances, an accurate acquaintance with the causes and symptoms of disease, and a knowledge of the use of the stethescope, is necessary. In pure asthma, which is a spasmodic, not inflammatory affection, bleeding is not generally advisable.

Of the numerous remedies extolled of late years, for their efficacy in affording relief during the paroxysms of asthma, the following may be mentioned; *tobacco*, and *stramonium*, the latter of which in particular has obtained a deserved celebrity in certain cases. The stalks of this plant are to be smoked as the paroxysm is coming on; and if free expec-

toration is produced by it, relief will be afforded. The same remark applies to tobacco. An American plant, named *lobelia inflata*, has also obtained much celebrity of late years. The dose varies from half a drachm to two drachms of the tincture. Strong coffee is often of some service during the fit. Ipecacuan and squills are also of use in many cases. These remedies are chiefly useful in asthma, accompanied with habitual cough. In nervous or hysteric asthma, opium and ether are the most appropriate and effective remedies.

In the intervals the strength ought to be improved by tonics, such as sulphate of quinine, or the preparations of iron; by change of air, and the use of some mineral waters. If chronic catarrh (bronchitis) is present, as is most likely if the case is one of those alluded to, the cough and expectoration should if possible be improved by the use of expectorants, such as squills or ipecacuan, or the alkalis, potass, and the carbonates of potass and soda. With these means should be combined the daily sponging of the chest with cold water, by which the susceptibility to attacks is greatly diminished.

PALSY. (Page 344.)

Palsy is most commonly an effect of some change in the brain or spinal cord, such as gives rise to apoplexy; the treatment of the latter is that, consequently, which will most likely be of use in the former. Electricity is in some cases of use, but the application of blisters or liniments to the palsied part can scarcely be expected to be of service, when the seat of the disease is in the brain or spine. In such cases blisters on the head, or along the course of the spine, are more likely to be of use, if any thing can be really serviceable. There are certain cases of palsy, where it has been caused by injury or disease of the nerves of the affected part, and in such cases, blisters may be applied along the course of the nerves.

EPILEPSY. (Page 346.)

It is impossible to lay down many general rules for a disease which depends upon so many different causes. The treatment must be adapted to the age, sex, constitution and habits of the patient, and in particular, to the cause upon which the disease appears to depend.

During the first paroxysm, if severe, blood may be drawn.

The head should be kept somewhat elevated and cool; every thing tight being removed from the neck. Air should be freely admitted to the room. A piece of soft wood should be inserted between the teeth, to prevent the tongue being injured. If the patient feels the fit coming on, it may in some cases be prevented by a draught of ether, camphorated mixture, or aromatic spirits of ammonia. If the fit is preceded by a sensation as of air passing upwards to the body, from a limb, it may sometimes be cut short, by immediately tying a tape firmly round the upper part of the limb.

The head should always be kept shaved; and every morning at least, a jug of lukewarm water should be poured over it. The shower bath may be used advantageously, for the same object.

The epileptic should not sleep too long, but should go to bed at eleven, and rise at six. Exercise is of the very highest importance. Next to that, moderation in diet. If the patient is of a full habit of body, or labours under indications of what is called determination of blood to the head, the diet should be vegetable. In other circumstances, animal food once a-day may be allowed. All intoxicating liquors must be strictly avoided, and the use of tobacco, if indulged in, abandoned. The patient should, according to his strength, walk ten, fifteen, or twenty miles a-day; beginning with an hour's walk before breakfast, having taken some light nourishment, however, on rising; about three hours after breakfast, a two hours walk should be taken; and three or four hours after dinner, more exercise of a similar nature; a light supper followed by cheerful employment, or conversation, should conclude the evening.

The medical treatment must be adapted to circumstances; cupping, leeches, and blisters on the nape of the neck, if there is fulness of the blood-vessels about the head. Antimonials and diaphoretics, if the skin is dry and scaly. Tonics of iron, quinine, calumba, snake root, and gentian, accompanied with laxatives, if the stomach is much deranged. With these medicines must be combined, camphor, valerian, or castor, with aloetic purges, or hyosciamus, if there are nervous symptoms, or derangement of the menses; in the latter case, oil of turpentine with castor oil, may be given often with advantage, or pills of aloes, myrrh, and sulphate of iron. In all cases the bowels must be kept freely open;

it being advisable to clear them out every second day with some laxative.

If worms are suspected, turpentine is the proper medicine. (See Worms.)

HYSTERIA. (Page 357.)

The treatment of this affection is very similar to that of epilepsy. During the fit, all that is necessary is to prevent the patient injuring herself; or to apply cold wet cloths to the forehead if the face is much flushed. The same means spoken of under *epilepsy* may be adopted to prevent its coming on. In some instances the patient is able, by a resolute effort of the mind to keep off a paroxysm. Musk, valerian, and assafœtida, have all been highly extolled in this affection. Derangement of the menses is a frequent cause of hysteria, and must be rectified by the appropriate treatment. (See Epilepsy.)

The remarks made as to diet and exercise in the preceding note, are equally applicable here, reference of course being had, in their application, to the strength and sex of the patient. Change of air, the use of chalybeate or other mineral waters, such as those of Cauterets and Bagnoles, Selzer, Spa, Pyrmont, Carlsbad, or Bath, have in many cases been of great service.

HYPOCHONDRIA. (Page 361.)

See regulations as to diet and exercise in Note on Epilepsy.

POISONS. (Page 377.)

The symptoms of poisoning vary somewhat, according to the quantity taken, and whether it is dissolved or solid. The symptoms caused by no two poisons are exactly alike. so that each requires to be studied separately to learn exactly the combination and kind of symptoms it produces. Notwithstanding this circumstance, the following general remarks may convey some useful information of a practical kind.

For our present purpose, poisons may be divided into two great classes, *acrid* or *irritant* poisons, and *narcotics*.

1. The *irritant* poisons are chiefly those that belong to the mineral kingdom, such as the strong acids, sulphuric, nitric, muriatic, oxalic and acetic acid; the alkalis, potass,

soda, lime, &c.; arsenic, corrosive sublimate, the salts of copper (verdigris, &c.,) those of lead (the carbonate or white lead, sugar of lead, &c.,) tartar emetic, and others of the same kind. The active purgatives, such as colocynth, scammony, gamboge, &c., in large doses, are also irritant poisons.

The *symptoms* caused by these poisons are chiefly those arising from violent inflammation of the stomach; being intolerable pain and burning heat in that organ, incessant vomiting, (frequently of blood,) thirst; great restlessness and anxiety; coldness of the extremities; clammy sweats; difficult breathing; faintness; and quick, small, and hard pulse; incessant diarrhœa, or ineffectual efforts to go to stool or void urine; convulsions, or deep insensibility, sometimes precede death. In addition to those symptoms, when the first-mentioned poisons have been swallowed, there will be inflammation of the tongue and throat, with acute pain in those parts, and great difficulty of swallowing.

Treatment.—In general, it may be remarked, that the best antidote for a poison is its speedy removal from the stomach by means of an emetic. The best emetic in these cases, because the speediest in its operation, is white vitriol, (sulphate of zinc,) half a drachm of which may be given, and a second dose in fifteen minutes if it does not operate. Copious drinks of warm mucilaginous and oily fluids, milk, &c. should at the same time be given. If sulphate of zinc cannot immediately be procured, eight or ten grains of sulphate of copper, (blue vitriol,) or a spoonful of mustard or common salt, may be given, or the throat tickled with the finger, or a feather.

For some of the poisons we possess antidotes which would be very effective if administered in time. For the strong acids, chalk or magnesia should be given, the former being perhaps preferable; and as no time is to be lost, especially in poisoning with oxalic acid, a poison often taken by mistake for Epsom salts, and which may cause death in ten or twenty minutes, if chalk is not at hand, the plaster of the apartment should be broken down, beat small, mixed up with water, and given. For potass and soda, oil should be freely given. For corrosive sublimate and verdigris, the white of eggs and draughts of milk. For tartar emetic, large doses of Peruvian bark infused in water. For muriate of baryta, common Epsom salts.

The treatment recommended for *gastritis*, bleeding or leeches to the stomach, &c., must then be adopted. (See Note on Inflammation of the Stomach.)

2. The *narcotic* poisons. Of these opium, henbane, alcohol, (and spirituous liquors in general,) cherry laurel and prussic acid, stramonium, tobacco, hellebore, hemlock, deadly night-shade, and fox-glove, may be mentioned. The first three or four, and especially opium, are chiefly narcotic in their action; the others also cause inflammation of the stomach and bowels, if the person survives for a short time.

The *symptoms* caused by opium, and some of the others, are deep sleep, gradually passing into insensibility, from which for a time the patient can be momentarily roused if shaken violently; the insensibility now generally becomes complete; there is, occasionally, vomiting and paralysis, and convulsions may precede death. Cherry laurel and prussic acid cause almost instant death, preceded by violent convulsions; strychnia and nux vomica act similarly. The others cause, besides stupor, occasionally violent delirium, vomiting, and diarrhœa, pain in the throat, stomach and bowels, and convulsions.

Emetics are the proper antidotes for these poisons: for prussic acid hartshorn should be held to the nostrils; cold water should also be dashed over the patient. This should also be done in poisoning with opium, (or laudanum,) and others, where the insensibility is so great that vomiting cannot be effected, and an emetic immediately administered; the patient should at the same time be kept constantly roused, by dragging him up and down on his legs, pinching him, pulling his hair, pouring cold water into his ears or over his head, talking loudly and pushing him about; this should be indefatigably persisted in. Acids (vinegar, &c.) are generally injurious, especially so when opium has been taken, until at least the poison has been completely discharged, when acid drinks or coffee may be given. These means should be persisted in until the stupor is dissipated, which may be ten or twelve hours in some cases. If the patient gets very low, and the breathing begins to stop, stimulants must be given, brandy, hartshorn, &c. the limbs rubbed, and if necessary artificial respiration should be attempted, by breathing through the nostrils in the manner recommended for resuscitating drowned persons. If the stupor is dissipated by the means directed, it may be necessary to bleed if excitement su-

pervenes, especially if there is any indication of inflammation of the stomach or bowels. (See Notes on these affections.)

BITES OF POISONOUS ANIMALS. (Page 380.)

When a person is bit by a venemous animal, the part should be immediately sucked well by the mouth, of course emptying the mouth always by spitting ; no danger will, in general, arise from this. A cupping glass may with advantage be applied over the part. If a limb, a hand or foot, has been wounded, a ligature should be tied round the limb, a little way above the wound, pretty tight, and blood drawn freely from a vein in the part below the ligature. Wounds with foul instruments, should be also immediately well sucked. These measures may be followed by a poultice to the part, and the other treatment recommended by Br Buchan adopted, although we possess no specific, which, taken internally, will counteract the effects of the poison.

GONORRHŒA. (Page 391.)

The inflammation should always be subdued, first by low diet, purging, fomentations, &c. before injections can be used. They should then be used with caution, not throwing them in beyond a few inches ; this is easily managed by firmly grasping the part, two or three inches back from the point, between the thumb and finger. Their strength may be gradually increased. Copaiba, and ether, or cubebs, may be taken with advantage, in very many cases. Priapism, chordee, &c. may be relieved by a pill or two of camphor and hyosciamus, or anointing the part with ointment of belladonna, after being well fomented. Mercury should never be used in the cure of this affection, either externally or internally ; it is unnecessary, and highly injurious to the constitution.

SWELLED TESTICLE. (P. 400.) BUBOES. (P. 401.)

When a hard indolent swelling remains, it may be gradually removed, either by rubbing it with some stimulating liniment containing camphor, or ointment of iodine, or the iodide of potassium, (not mercury,) and firm support, or, if possible, pressure, by a bandage ; or lastly, by the repeated application of blisters.