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J. MEAD.

MODERN
DOMESTIC MEDICINE:

BEING A

TREATISE

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ON THE

NATURE, CAUSES, SYMPTOMS, AND TREATMENT

OF THE

DISEASES

OF

MEN, WOMEN, AND CHILDREN,

IN BOTH

COLD AND WARM CLIMATES:

WITH

APPROPRIATE PRESCRIPTIONS IN ENGLISH.

THE WHOLE PRECEDED BY

PRACTICAL RULES

FOR THE PRESERVATION OF HEALTH, THE BEST MEANS FOR INVIGORATING THE HUMAN BODY AND PROLONGING LIFE, AND THE MODE OF PREVENTING THE EXTENSION OF INFECTIOUS DISORDERS, AS ALSO OF ANNIHILATING CONTAGION.

BY

ROBERT THOMAS, M. D.

AUTHOR OF "THE MODERN PRACTICE OF PHYSIC," AND AN HONORARY MEMBER OF THE LITERARY, PHILOSOPHICAL, AND HISTORICAL SOCIETIES OF NEW-YORK.

NEW-YORK.

PUBLISHED BY COLLINS AND CO. 117 MAIDEN LANE.

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"Modern Domestic Medicine: being a Treatise divested of Professional Terms on the Nature, Causes, Symptoms, and Treatment of the Diseases of Men, Women, and Children, in both Cold and Warm Climates: with appropriate Prescriptions in English. The whole preceded by Practical Rules for the preservation of Health, the best means for invigorating the human body and prolonging Life, and the mode of preventing the extension of infectious Disorders, as also of annihilating Contagion. By Robert Thomas, M. D. Author of "the Modern Practice of Physic," and an Honorary Member of the Literary, Philosophical, and Historical Societies of New-York."

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FRED. J. BETTS,
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TO

THE PUBLIC

This Work

IS MOST RESPECTFULLY DEDICATED,

BY

THEIR DEVOTED SERVANT,

THE AUTHOR.

PREFACE.

THE preservation of health is, beyond all doubt, a matter of general importance; and although its rules, scientifically considered, belong to the profession of Medicine, yet as they are level to the understanding and experience of every man of reflection and reading, the subject may, with great propriety, be considered as nearly universal.

Viewing it in this light, I was induced to compose this work now submitted to the public. In Great Britain, as well as in North America, the first Edition of it was well received; and this being now exhausted, a second is presented, which the reader will readily perceive has not only been carefully revised, but likewise much improved by an addition of important matter under a variety of heads; and several diseases have been introduced into it, which were omitted in the former. It has thereby been rendered more complete as likewise perfect; due attention having been paid to the correction of a few erroneous opinions, which had been advanced in the prior Edition. Under these improvements, I trust the Modern Domestic Medicine will continue to rise in the estimation of the Public.

Throughout the whole of the Work, it has been my endeavour to convey useful and practical information in plain language, and as much as possible to avoid the introduction of professional terms; but where any such have unavoidably occurred, an explanation accompanies them. In treating on the different subjects, I have not only given the result of my own experience and observations during a practice of half a century, but have availed myself of the suggestions of the most eminent Physicians and Doctors, by an attentive perusal of their Works. No improvement, which may be considered as appertaining to domestic medicine, or indeed in the general treatment of diseases, has, I trust, escaped my notice and record. The rank it may be entitled to hold, on comparing the work with others of a similar nature, I must leave to the decision of those who may be competent to judge of its merits or defects.

I have dedicated it to the Public, being desirous to obtain their patronage; and am well satisfied that it will prove a valuable acquisition to every person who is solicitous to enjoy a good state of health, and that will conform to the rules laid down at the commencement of it. It points out the happy effects of temperance in diet, as well as in all other matters; the necessity of regular

and sufficient exercise every day in the open air, when the weather will admit of it, and the proper substitutes within doors, when it does not; the being clothed suitably to the seasons of the year and atmospherical vicissitudes of each day; the propriety of guarding as much as possible against any exposure to cold air or piercing winds, when the body is heated by exercise, or hot rooms, lest a sudden check be given to perspiration, and the person thereby rendered very liable to an attack of fever, rheumatism, or some other inflammatory disease; the healthful consequences which are likely to result from an observance of early and regular hours for retiring to rest at night, and rising in the morning; the comfort as well as healthiness attendant on the practice of strict cleanliness both in our persons and habitations; the necessity of attending to the state of the bowels, and not suffering them at any time to be confined beyond the period of a day, or perhaps two at farthest; and lastly, keeping the different passions under due control, neither immoderately indulging in those of an exciting or enlivening tendency, such as joy, love, &c. nor, on the other hand, giving way to those of a depressing nature, as grief, fear, and anger.

At the commencement of the Work, I have also pointed out the means for effectually preventing the extension of all infectious diseases, and annihilating the power of every species of contagion; and therefore it may prove highly useful to those who preside over seminaries for the instruction of youth of either sex: those who conduct extensive manufactories, and all large families, particularly where there are several children; as by carefully attending to these regulations, typhus as well as scarlet fever, the ulcerous or malignant soar throat, small pox, measles, &c. may be kept wholly confined to the individual in whom any of these infectious diseases first manifests itself, and its communication or spread among others be prevented.

Moreover, I have noticed the means for enabling Europeans, who either visit, or go to reside in, a warm climate, to enjoy an uninterrupted state of good health; as also to guard them against an attack of the yellow fever where it is prevalent; and likewise mentioned the regulations necessary to be attended to by persons who leave a warm climate for a cold one.

I have then proceeded to explain the nature, symptoms, causes, and treatment of the various diseases to which men, women, and children are subject, not only in cold climates, but also in warm ones; and have given prescriptions in English, of appropriate medicines, with their suitable doses; the former arranged under different classes, such as absorbents, astringents, emetics, purgatives, &c. the latter in a table, which shows what persons of different ages may require. In both, I have adopted the modern names of medicines, conformable to the latest improvements in chemistry, and sanctioned by the London College of Physicians in the last Pharmacopœia published under their authority. It must be understood by the reader, that in referring to the different classes, the letter P

anplies prescription, and has been employed throughout the work for the sake of brevity. Previous, however, to entering on these subjects, I have stated a few questions, which it will be advisable to put to the sick or those about them, for the purpose of ascertaining the real disease with which the patient is afflicted, as well as proper information on several other points.

Such is the nature of this Work; and should it prove of as great utility to those who are not of the medical profession, as my Modern Practice of Physic has done to those who are in the exercise of it, I shall be highly gratified. Although it has been composed principally for the use of the clergy, and other heads of families, managers of factories at home or plantations in the British Colonies abroad, and captains of ships not having a surgeon on board, still it may not be found undeserving of the attention of medical students, or those who are of so recent a standing in practice as not yet to have acquired a readiness in discovering diseases, and of prescribing remedies suitable to their nature and different stages.

It may be thought by some persons, that, as there are already one or two Works on Domestic Medicine before the public, another was not requisite; but, in answer to this objection, I beg leave to say, that not one of them takes the least notice of any of the diseases peculiar to warm climates, an intimate knowledge of which I acquired during a practice of several years in the West Indies, —the prior portion of which was in association with Dr. Josiah Nesbit, the first husband of the lady who afterwards was married to the heroic Lord Nelson; neither do they point out that difference of treatment which is required in those climates in those diseases which are to be met with in both cold and warm latitudes. They are likewise defective in not affording the least information as to the various forms under which a venereal taint appears in the human constitution, and how to eradicate it; and indeed there are many other diseases, such as puerpureal fever, the enlarged leg of lying-in-women, carbuncle, &c. &c., which they take no notice of, all of which are inserted in my Domestic Medicine.

Objections to the Work may probably be stated by some professional men, a few of them influenced by selfish motives, and others from an apprehension that persons who become possessed of it may be induced to place too great a confidence in their ability to discriminate between diseases; and, by neglecting proper and regular assistance at the commencement, there may be a probability of their thereby becoming either confirmed or exasperated. I am ready to admit that this may now and then be the case; but I am nevertheless of opinion, that the casual evil is greatly overbalanced by the instruction which it affords to those who are humanely disposed to visit the sick poor, in districts remote from the residence of any professional man; or who either may not be able to pay for such advice, or be entitled to it by their parish regulations. It will also enable the heads of families, in the case of any

sudden attack of an acute disorder in their own families, to administer an appropriate medicine instantly, so as to relieve the sufferings of the patient until the arrival of his medical attendant. In all such cases his assistance should be obtained as speedily as possible; for medicine is a science, the proper knowledge of which is only to be acquired by much study in the library, and an attentive observation at the bedsides of patients.

By referring to the different Reviews which have as yet noticed this Work, it will be perceived by the reader, that it has been pronounced the best treatise on the subject of Domestic Medicine which has yet appeared before them; as it contains not only many useful remarks on diet and regimen, but includes the changes of the treatment of diseases corresponding to different climates, a recommendation which few, if any, of the others possess. Moreover, they recommend the perusal of it to all those who, not being of the profession, will read medical books in preference to all others of a similar nature.

ROBERT THOMAS.

Salisbury.

OF THE

MEANS OF ATTAINING

A HEALTHFUL AND LONG LIFE,

AND

Strengthening a Delicate Constitution.

As perfect health is the greatest blessing we can possess on earth, and without it, youth, beauty, honours, titles, and riches are but of little avail, I cannot commence a work on popular medicine more appropriately, than by pointing out the means for the preservation of what is essentially necessary to our comforts and happiness; by paying a due attention to which, persons who are born with, and enjoy a good constitution, will stand fair for attaining longevity; and even those of a delicate and a tender one, be enabled to arrive at an advanced age. They hold forth the doctrine that regularity and temperance in all things, are highly advantageous to the human species; and, on the contrary, that irregularity and intemperance are very prejudicial.

Temperance is a kind of regimen under which every man may put himself without interruption to business, expense of money, or loss of time; and may be practised by all ranks and conditions, at any season, or in any place. If exercise assists in throwing off superfluities from the body, temperance prevents them; if exercise clears the vessels, temperance neither satiates nor overstrains them; if exercise promotes a free circulation of the blood, temperance gives nature full play, and enables her to exert herself in all her force. Cheerfulness of temper and vigour of body, are the usual results of temperance; on the contrary, depression of spirits, a shattered constitution, disease, and often poverty, are the consequences of a continued course of intemperance.

It is much easier to preserve health than to recover it when impaired, and to prevent diseases than to cure them. Towards the first, the means are generally in our own power, little else being required than strict temperance in all things; but towards the latter, the means are uncertain and perplexed, and for the knowledge of them, the greatest portion of mankind must apply to others, of whose skill and judgment they are in a great measure ignorant.

To maintain the body in a healthy state, it will be necessary to pay a strict attention to the following circumstances, viz. a temperate use of the food and drink with which life is supported; the air we breathe; the clothing with which we are covered; due cleanliness; the necessary exercise; sleep and watching; the excretions and retentions as they are usually termed; and, lastly, the proper regulation of the passions.

Having noticed these in the order under which they here stand, and laid down a few rules for the preservation of the health of Europeans who exchange their climate for a warm one, as well as the reverse of this, I shall proceed to mention those means which should be employed in diseases of an infectious nature, for the purpose of preventing their further extension or communication to those who are in health; after which, I shall point out certain and effectual methods of destroying and annihilating contagion of every kind.

OF FOOD AND DRINK,

AND

Temperance in Both.

The man who wishes to live long, be healthy, and die without sickness either of body or mind, but by mere dissolution, or a long course of years, must submit to live regularly, and be temperate in his habits; since he cannot otherwise expect to enjoy the fruits of such a life, nor be agreeable to himself or useful, in all probability, to his friends; neither can he relish the bounties of Divine Providence, nor acquit himself of his duties to God.

Some inconsiderate and sensual persons affirm, indeed, that a long life is no blessing, and that the state of a man who has passed his seventy-fifth year, cannot really be called life, but death; but we daily see, in our public papers, instances recorded of persons having attained the age of ninety or an hundred, enjoying most of their faculties; and whoever will read the tract of Sir Thomas Barnard on the comforts of old age, as also the life of Lewis Cornaro, the Venetian, will perceive that this is a mistaken notion. At the age of one hundred years, he was, by temperance in all his pursuits and indulgences, and particularly in his diet, capable of mounting his horse without any assistance, or advantage of situation, and could not only ascend a flight of stairs with ease, but climb up a hill on foot, from bottom to top, with the greatest ease; moreover, he was gay, pleasant, and good humoured; free from perturbation of mind, and every disagreeable thought. He did not find life burthensome, but, on the contrary, spent every hour, we are informed by him, with the greatest delight and pleasure; sometimes in conversing with men of his acquaintance, valuable for their good sense, manners, and letters; sometimes in reading the works of favourite authors, and occasionally in writing.

He was extraordinary sober, and dieted himself with so much wisdom and precaution, that finding his natural heat decaying by degrees in his old age, he also diminished his diet by degrees, so far as to stint himself to a very trifling meal indeed. By this means he preserved his health, and was also vigorous to the age of an hundred years; his mind did not decay; he never required the assistance of spectacles; neither did he lose his hearing; and that which is no less true than difficult to believe is, that he preserved his voice so clear and harmonious, that at the end of his life he sung with as much strength and delight as he did at the age of twenty-five years.

"O, Temperance," says Sir William Temple, "thou physician of the soul as well as the body, the best guardian of youth and support of old age, the tutelar goddess of health, and universal medicine of life, that clears the head and cleanses the blood, that eases the stomach and purges the bowels, that strengthens the nerves, enlightens the eyes, and comforts the heart; in a word, that secures and perfects digestion, and thereby avoids the fumes and winds to which we owe the colic and spleen, those crudities and sharp humours that feed the scurvy and gout, and those slimy dregs and humours of which the gravel and stone are formed within us; diseases to which mankind are exposed rather by the viciousness than frailty of our nature, and by which we often condemn ourselves to greater torments and miseries of life, than perhaps have yet been invented by anger and revenge, or afflicted by the greatest tyrants upon the worst of men. And yet so little notion have the generality of mankind of the virtue of temperance, that life with them is nearly one continued scene of intemperance.

To what cause, so much as to intemperance, are owing faded youth and premature old age, an enervated body, and an enfeebled mind, together with all that long train of diseases which the indulgence of appetite and sense have introduced into the world. Health, cheerfulness, and vigour, are well known to be the offspring of temperance. The man of moderation culls the flowers of every allowable gratification without dwelling upon it until the flavour be lost: he tastes the sweets of every pleasure without pursuing it till the bitter dregs rise; whereas the man of the opposite character dips so deep as to stir up an impure and noxious sediment, which lies at the bottom of the cup.

It is too true, that the major part of mankind are intemperate and sensual, and they love to gratify their appetites and commit excess; and seeing that they cannot avoid being greatly injured by their excesses, they, by way of apologizing for their conduct, say that it is better to live ten years less, and enjoy themselves, not properly considering of what importance are ten years more of life, especially a healthy life, and at a maturer age, when men become sensible of their progress in knowledge and virtue, which they cannot obtain to any degree of perfection before this period.

A life of irregularity and intemperance has the certain effect to

destroy persons of the best constitution even in the prime of life; while, on the other hand, one of regularity and temperance will frequently preserve men for a length of time, who are of a very delicate or bad constitution, and far gone in years. Whoever will read the life of Lewis Cornaro must be convinced of this. This Venetian had been addicted to a life of intemperance up to his fortieth year, the consequence of which was, that a heavy train of infirmities had invaded him, and made great inroads on his constitution; and after having to no purpose tried every means of relief that art and medicine admitted of, he at last, by the advice of his physicians, entered on a life of the strictest temperance, by which he regained his health, and lived to a very advanced age. Daily observation has, indeed, fully convinced me that an elderly man, even of a delicate constitution, who leads a regular and sober life, has a better chance of a long one, than a young man of the best constitution, who invariably leads a disorderly one.

That irregularities of diet, repletion, and unwholesome food, are the origin of many diseases, cannot admit of a doubt; and that the preservation of health much depends on a proper regimen, is equally obvious.

When it is considered that many serious disorders are entirely occasioned by an improper diet, and that in almost every complaint the due direction of diet is perhaps of equal importance with the prescription of medicines, it is highly blameable to neglect this powerful resource. To delicate women and sickly persons, to pregnant women and those who are nurses, and to young children, restrictions on diet are indispensably necessary.

In every stage of human existence the functions of the stomach are of high importance, and the same rules of diet which prove beneficial to the invalid or weakly, will generally apply to the aged. The substances selected for the diet of old persons should be adapted to the state of their teeth; and solid viands, and those which are difficult of solution, ought to be minced, or otherwise prepared to meet the defects of the chewing instruments. In addition to the gradual failure of the teeth, the stomach itself suffers a diminution of its powers to convert food into chyle and bodily refreshments; and hence it becomes needful to be more particular about the diet in advanced life.

It has wisely been observed by Hippocrates (who has been called the father of medicine), that if a man eats sparingly, and drinks little, he is nearly certain of bringing no disease upon himself, and that a moderate supply of food nourishes the body best.—The quantity of food which nature really requires for her support, is small, and he that lives temperately, and eats and drinks moderately at each meal, stands fair to enjoy sprightliness, vivacity, and freedom of spirits. Bodies that are governed by temperance and regularity, are rarely hurt by melancholy, or any other affection of the mind. To have a clear head, we must have a clean stomach, for this is the grand reservoir in which the food is first deposited.

and from thence its nutritive power is distributed throughout all parts of the body.

An error into which many people fall is that of eating too much at once. If the stomach be filled with a greater quantity of food than it can easily bear, or what is proper, its coats are stretched beyond their natural tone, and rendered incapable of performing its digestive powers; the food being longer retained than by the laws of the circulation it ought to be, and undergoing a disorderly fermentation, gives rise to crudities, sour eructations, flatulency, listliness, headach, and stupor; for the stomach having an intimate connection with the brain and nervous system by sympathy, whenever one of them is disordered, the other seldom fails of partaking in the calamity.

Who never fasts, no banquet e'er enjoys;
Who never toils or watches, never sleeps.

He that consults his health must check his appetite, and invariably rise from table with the ability and disposition to eat and drink still more than he has done. He should also diligently apply himself to discover what kinds of food are best suited to him; for the proverb that whatever pleases the palate must agree with the stomach and nourish the body, or that which is palatable must be wholesome and nourishing, is founded in error. The best rule will be not to take any thing, but in such quantity as the stomach can easily digest, and to make use of only those things which from observation and experience the person has found to agree with him. The quality, as well as quantity is, therefore, to be taken into consideration. By repeated trials and experience any man may acquire a perfect knowledge of his constitution, and ascertain not only what food, but likewise the liquor, that agrees best with his stomach; and in regulating his diet, he may place a safer reliance on his own judgment than he can on the opinion of his medical attendant, be he ever so skilful.

An attention to diet and temperance in all other respects is not only necessary for the preservation of health, but is likewise of great importance in the cure of diseases, and many of them indeed may be cured by a suitable diet alone. Avoid, therefore, any excess at table, or the partaking of a great variety of dishes; for intemperance not only renders the understanding cloudy and injures the constitution, but likewise degrades the soul. Do not confine temperance, however, to merely eating and drinking, but let it be extended to the moderating every other appetite, inclination, or passion.

Abstinence is the best cure for any excess which has been committed in eating or drinking. In paying a strict attention to temperance, we are to take care at the same time not to carry it so far as to border on abstinence of an excessive nature; for this is by no means conducive to health, but the direct contrary, because a copious supply of fresh and wholesome food is requisite for the support of the body, and is peculiarly necessary for those who labour hard.

For the preservation and restoration of our bodies, the Author of our Existence has furnished us with two appetites; the one to solids, which we call hunger, and the other to fluids, which we denominate thirst.

Every kind of substance which is approprated for food ought, at least, to contain the principles of chyle (which is the milk-like liquor, observed some hours after eating, in the lacteal vessels of the mesentery, and is that fluid substance from which blood is formed), although some substances are more easily convertible into this restorative fluid than others. Animal food enriches the blood, increases the muscular strength, stimulates the solids, accelerates the circulation, and disposes the body much more to fevers and inflammatory complaints than vegetable food. Too liberal a use of it is, therefore, improper, especially in hot weather, and warm climates, when, and where, it is much inclined to run speedily into a state of putrefaction; hence it is, that in putrid and inflammatory complaints, or in any case when the blood is heated beyond what is natural, animal food should be avoided, and the patient confined altogether to a diet of vegetables which is milder, easier digested, and does not load the system so much.

Animal food, by being kept for a moderate length of time exposed to the external air, is rendered more tender, more grateful to the palate, and more easy of digestion, than the flesh of animals recently slaughtered. Flesh meat, however, should not be kept so long exposed to the influence of the air as to intrench on its sweetness; for as soon as it begins to affect the smell, it then becomes prejudicial to the human body, as well as disagreeable to the palate; and not affording healthy chyle, it may be considered as inimical to health.

By boiling animal food in water, its virtues and juices are in a great measure communicated to the broth, and for the invalid, this is a very good way of exhibiting this species of food; for the stomach, which would in a state of debility be incompetent to digest meat in a solid form, can make use of it thus prepared with advantage. I am, however, of opinion that boiled meats, for the most part, contain less nutriment than the same meats when roasted or broiled; although, when not overdone, they may be easier of digestion. It has been computed that from the dissipation of the juices by boiling, one pound of roasted meat contains as much nourishment as two of that which is boiled.

Animal food, when moderately roasted or broiled, and containing its proper juices, is both pleasant to the palates of most people, and highly nutritive to the body; by being too much exposed to an open and large fire it is not only deprived of its juices, but has a hard brown crust formed on its surface, which is wholly indigestible.

In the cooking of our food, it should not, therefore, be overdone by any of the processes either of roasting, broiling, or boiling. When meat is roasted or broiled too much, it is apt to make it

somewhat rancid, or by having its juices injured or evaporated by the action of too strong a fire, to be rendered hard and difficult of digestion.

If our meat be boiled for too long a time, or too fast, we shall obtain, where albumen predominates, as in beef, a hard and indigestible substance like an overboiled egg; or where gelatine predominates, as in young meat, such as veal, &c. a gelatinous substance, equally injurious to the digestive organs. Young and viscid food, therefore, as veal, chickens, &c. are more wholesome when roasted than when boiled, and are also more easily digested.

Boiling is a process particularly applicable to vegetables, rendering them more soluble in the stomach, and depriving them of a considerable quantity of air so injurious to weak stomachs. In conducting this process it may be advisable to pay some attention to the quality of the water employed: thus, mutton boiled in hard water is found to be more tender and juicy than when soft water is used; while vegetables, on the contrary, are rendered harder and less digestible when boiled in hard water.

Meat that is cooked by frying it in a pan over a fire with butter, &c. and which is thereby rendered empyreumatic, is not very proper for the purpose of digestion, and ought to form the least proportion of a salutary diet. With invalids, it will be very likely to produce injurious effects; and of all culinary operations is probably the most objectionable.

Baked meats are not easily digested on account of the greater retention of their oils or fat by this process, and they are moreover in an empyreumatic state. Such dishes require the stimulus of various condiments to increase the digestive powers of the stomach.

Meat, when long hardened in salt, is deprived very much of its nutritious juices, which run off in the brine, and render it less nourishing. It is only in this sense that salt is prejudicial; for, with respect to itself, it is far from being unwholesome; indeed, in a moderate quantity, it not only renders our food more palatable, but better adapted to the digestive organs. It has been observed, that when salt is mixed with the food of animals it makes them more healthy and thriving, and that they eat it greedily. Sea salt enters into almost all culinary preparations, and is a powerful agent in resisting a putrefactive tendency.

Food which is simple, provided it be easy of digestion, and affords a due quantity of nourishment, is far preferable to that which is compounded by the rules of art and cookery, and rendered more savoury by an addition of aromatic spices. Eating a variety of high-seasoned viands, and partaking of many dishes, is very unwholesome; for the stomach thereby becomes overloaded with an heterogeneous mass, exceedingly pernicious in its effects. Moreover we are induced to exceed the bounds which nature has prescribed for us, and by such means, the stomach labours under all the direful effects of repletion. Food, plainly roasted, broiled, or boiled, is all that is really necessary for people in health; and to eat moderately of one dish, is certainly most wholesome. Simpli-

city of food requires no physical alteratives, and due exercise with temperance, prove the best cathartics.

In eating our food, due care should be taken to chew, or masticate it sufficiently, previous to its being swallowed: this is a point deserving of a very strict attention, and may be deemed the first process of digestion; for without the solid parts of our food being well triturated in the mouth, and at the same time incorporated with a due proportion of the salivary secretion, it cannot be converted into good chyle, or healthy nutriment.

Those who dine late, as is customary in high life, should take something of a light nature, such as a bason of soup, &c., between breakfast and dinner, as by long fasting the stomach is apt to become relaxed, and to be troubled with flatulency, and other uneasy sensations.

I would here observe that persons in good health, and of an active mode of life, require a greater quantity of food than the infirm, and that those who use very active exercise stand most in need of a generous and free diet. The aged seem to require less food than those of a middle age. Persons who lead a sedentary life should be cautious in their diet, and take care not to commit excess either in eating or drinking. Men advanced in years, as well as those of a ripe age, fast easily, but young persons and children that are brisk and lively, fast with difficulty and inconvenience.

With respect to the different kinds of animal food most in use I shall add a few observations; but I beg leave first to say, that, both beef and mutton fed on grass may be considered as lighter and easier of digestion than stall fed oxen and sheep; and that the best and only way to have healthful and sound animal food, is to leave them to their own natural liberty in the free air and their proper aliment, taking care that they have plenty of food; that they are furnished with a proper shelter from the inclemencies of the weather, when they have a mind to retire to it; and that due cleanliness is attended to. Beef affords in general a strong degree of nourishment, especially to those who use very active exercise or labour, and the flesh of a bullock about the middle age, is greatly to be preferred to that of one which has been worn out with labour, and then fatted. Wether mutton of a due age, is also a wholesome and nutritious species of food, well adapted to all ages; and lamb may be considered a delicacy easy of digestion and nutritive. Veal is a kind of aliment well adapted to a weak stomach, as being light and readily digested. For convalescents, it appears preferable to the meat of the same animal when arrived at a more advanced age.

Mr. Carlisle, however, tells us in his Essay on the means of preserving human life, that it is an error to esteem white meats as the fittest for feeble persons. Generally, he says, it may be esteemed a safe rule, that veal, fowl, turkey, and other white meats, are less digestible, and afford less nourishment than the redder fleshed animals. Among the latter he has likewise included pork, but this,

I believe, has generally been considered as a nutritious kind of meat, particularly for the laborious and robust; but much of it ought not to be eaten at one time, particularly by persons in a feeble or convalescent state, as it is liable, from its excess of fat, to disagree with the stomach.

It is a just remark, I think, that the lean of fat meat is more nutritious, and easily digested, than that of poor or ill fed animals; but still the lean of meat is more wholesome than the fat. Animal fat, melted butter, and oil, are digested with some difficulty, and are apt to become rancid on the stomach. Fresh butter is certainly a nutritious substance, but is very apt to disagree with persons of a bilious habit; and, when eaten to excess, it not unfrequently produces eructations, nausea, and the vomiting of a bitter rancid oil.

The gravy of meat has been considered as productive of gout and scorbutic eruptions, but this opinion appears to be erroneous; for nothing is so nutritious, and, where animal food is admissible, may always be regarded, I think, as proper and wholesome.

Poultry, such as chickens, capons, and turkies, afford a good and salutary quantity of nutritious fluids, if not kept until their flesh has become tough and hard from age. Geese and ducks are juicy nourishing food, but they are rather of a heavy nature, and should therefore be partaken of somewhat sparingly. Pigeons, hares, rabbits, venison, &c., are light on the stomach, but are supposed to be somewhat heating, and inclined to putrescency, In cold phlegmatic habits, where the digestion is weak, they have been recommended as very beneficial.

Fish readily run into a putrid state, and, in this condition, are particularly unwholesome. Those that are caught in salt water are more nutritious than those which are taken from ponds and lakes; and such as contain the least fat or oily particles, are lightest, and most readily assimilated. The white sorts of fish, such as whiting, flounders, smelts, perch, haddock, turbot, and soals, may be considered as the lightest, most readily digested, and wholesome; but the viscid kinds, such as eels, salmon, trout, mackerel, and herrings, are apt to sit heavy on the stomach; and, therefore, when this organ is weakened, they may be likely to disagree, and prove somewhat prejudicial. It has been found that those who live much on fish are apt to be affected with cutaneous eruptions, and other diseases denoting a foulness of blood; and every person is apt to find himself more thirsty and heavy than usual after a full meal of fish, although perfectly fresh. The same objections may be adduced against salted fish, as were before alleged against meats which have been salted. The preserving material not only deprives them of their nutritious juices, but hardens their fibres, and impregnates them with an excess of salt, beyond what is adapted to the operations of the stomach.

Shell fish, when perfectly fresh, form an agreeable article of

diet, particularly oysters ; but they soon become tainted, and then are very apt to occasion surfeits, nettle rash, and erysipelas.

With respect to sauces, these are much used, not only for rendering our aliment (particularly fish) more agreeable to the palate, but for the purpose of stimulating the appetite. By their aid, possibly, digestion may also be somewhat assisted, if they are used moderately. Many of them are composed of vegetable acids, such as lemons, limes, Seville oranges, or vinegar, and not only give a relish to our food, but correct its tendency to rancidity. A good appetite, however, requires no sauce.

Spices and aromatics, such as the different species of pepper, &c., although they contain no nutritive qualities, may probably be of service in assisting the digestion of our food, if used with moderation, and particularly in warm climates, where their stimulating effects on the stomach are more required ; but, when used to excess, they destroy by insensible degrees the tone of the stomach and intestinal canal. In all febrile and inflammatory complaints they ought scrupulously to be avoided.

Cheese is introduced at most tables after dinner, under the supposition that it assists the stomach in digesting other matters, although it is itself digested with some difficulty. Cheese, by being toasted, becomes very unwholesome, as its difficulty of digestion is very much increased thereby, and when taken in this state for supper, which is done by many, is very likely to prove injurious. The newer and poorer that cheese is, so much the more difficult of digestion will it prove.

Milk is the food destined by nature for the infant period, and seems admirably adapted for the use of young children, as well as adults, whose powers of digestion are enfeebled either by dissipation or disease. In its pure state, however, it is apt to disagree with some persons ; in which case it will be advisable to dilute it with gruel or water. Those who labour under pulmonary consumption and hectic fever, are frequently confined to a milk diet, and in such cases, the milk of the ass has been much employed in preference to that of the cow, being of a lighter nature. When that of the former is not to be obtained, that of the latter may be rendered more easily digested, by allowing it to stand for some time, and then skimming off the cream from it.

Before I proceed to notice the different articles of the vegetable kind, which we are accustomed to mix with animal substances at our meals, I think it right to mention, that, for the preservation of our health, it will be highly necessary to pay a proper attention to the vessels used in the preparation of our food. It is well known that aliment of any kind, dressed in copper vessels, or such as have the coating of tin worn off from them, does frequently excite dreadful vomiting and other distressing symptoms ; nay, even death, owing to the corrosion of the copper, and the formation of verdigris, even by the action of common water on it, but still more readily, when any acid is added thereto. It therefore would be a desi-

rable thing that the use of copper pans should be discontinued altogether from our kitchens, and those of tin and iron be substituted.

In the preparation of pickles, it is customary to do them in a bell metal, brass, or copper saucepan, with the view of giving them a beautiful green colour, the vinegar acquiring the property of the brass or copper; but although this may be gratifying to the eye, the stomach seldom fails of being injured by the noxious impregnation from the metal, and when such articles of diet are served up at each meal, more injurious effects may result from the practice than are commonly supposed.

With respect to those substances which form that part of our aliment called vegetable food, those made from the several sorts of grain, ground, and prepared by fermentation, with a due mixture of water, seem to be the basis of this species of food, and have on this account obtained the appellation of the staff of life. The better that bread is fermented, the more easily it is digested. This article of our aliment has a powerful influence in correcting the putrescency of animal food, and therefore its use is indispensable for those who eat much of this species of food, which is perhaps too much the csse with the inhabitants of Great Britain in general.

Bread is apt, however, to be frequently adulterated with improper ingredients by bakers, and particularly with alum, which gives it a whiteness that it does not possess in its natural state. The alum, from its astringent quality, usually disposes those who eat bread thus adulterated, to great costiveness, and is apt to prove pernicious to the tender stomachs of infants. The home-made or household bread, is therefore the most wholesome. No bread should be eaten before it is one day old, as that which is new or fresh seldom fails of laying heavy on the stomach, or disagreeing with those who eat it, by engendering flatulency.

Pastry of all kinds, particularly when eaten hot, are to be considered as rather unwholesome, because the flower of which they are made has not been rendered light by fermentation. Pies, tarts, suet puddings, dumplings, &c. all contain a considerable quantity of air, which distends the stomach and bowels, and gives rise to flatulency, and other bowel complaints.

Peas, beans, and other vegetables of the podded kind, afford a good deal of nourishment, and are well adapted to a vigorous stomach, but from often remaining therein for a considerable time undigested and unassimilated, are sometimes injurious. In weak stomachs they are apt to prove flatulent. Potatoes, when deprived of their watery parts, of which they contain a considerable quantity, are food of a highly nutritive nature, well exemplified among the lower orders of the Irish, who pretty nearly subsist on them. Carrots, turnips, parsnips, artichokes, and asparagus are generally considered as both nutritious and wholesome : they are moreover easy of digestion, cooling, and somewhat diuretic.

With respect to the various kinds of salad, herbs, and greens,

such as lettuce, endive, spinage, cabbage, &c. they probably afford but little nourishment, and their principal use seems to be in counteracting the effects of animal food, so as to prevent its too rapid progress to a putrefactive state, and in being of a cooling aperient nature, from their containing a great portion of acescent juice. They have likewise laxative qualities, well calculated to relieve the bowels, and preserve the stomach from that nausea inseparably connected with too free a use of animal food. Cauliflowers, brocoli, &c. are a very pleasant kind of food, though not very nutritious; but like the former vegetables, they retard the putrescency of animal food in the stomach and bowels, whilst at the same time their flatulence is in some degree prevented by being mixed with it.

Onions, leeks, shalots, radishes, &c. are serviceable as stimulants in the process of digestion. From their heating quality, they are apt to increase the circulation, and may in a slight degree dispose the body to febrile heat. They had best therefore be used moderately in conjunction with animal food. They seem, however, best suited to persons of cold phlegmatic habits, or those who are disposed to nervous, dropsical, or paralytic affections, or where the digestion is defective or sluggish.

Mushrooms, champignons, &c. may be enumerated among the vegetable tribe as articles of food; but some of these fungous productions are known to possess very acrimonious and narcotic powers, and they produce very deleterious effects in a very short time after they are received into the stomach. From the very great similarity between the whole tribe of these fungi, it is often very difficult to distinguish those which are harmless from such as possess a poisonous quality. Those, therefore, who will endanger their life for the sake of gratifying their palate act very inconsiderately.

Most garden fruits, in a perfectly ripe state, are beneficial when the body is acted upon by the heat of summer, and when the blood is somewhat disposed to an inflammatory state thereby. From their laxative quality, they have a good effect in assisting the evacuation of bilious impurities, which are so predominant both in the stomach and bowels during very hot weather. With respect to constitutions, there are a few exceptions as to the wholesomeness of fruit, as in some they are apt to occasion flatulency: add to which, that, when eaten in an unripe state, they frequently induce acidity in the stomach, as well as distension and wind. There is one remark worthy of notice respecting fruit, which is, that we ought not to swallow the skin of any kinds of it, as it usually passes through the alimentary canal undigested, and is, therefore likely to be injurious when any quantity of it becomes accumulated in the bowels.

The sweet refreshing juices of strawberries, raspberries, currants, grapes, oranges, shaddocks, &c., may in general be deemed salutary, if not eaten to excess. Plums, walnuts, chesnuts, and hazel nuts, are of a hard and indigestible quality, and particularly the

latter; for these, when not restrained within the bounds of very great moderation, are frequently the cause of many untractable diseases, such as shortness of breath, vomiting, colic pains, and obstinate constipation of the bowels; and it has been remarked, that in those years in which nuts have been very plentiful, a number of people lose their lives by eating too freely of them.

In the use of fruits, much will depend on the sorts partaken of, as well as their state of maturity: their quantity as well as quality must also be taken into consideration. Providence has bountifully provided the inhabitants of warm climates with a great variety of acid and acescent fruits, for the purpose of allaying thirst, tempering heat, and correcting the tendency of the bile and other humours to putrescency, being at the same time highly grateful by their fragrance. Nothing, indeed, can exceed that which arises from the lemon, lime, and orange, both in their state of blossom, as well as fruit.

Melons and cucumbers, from their coldness and watery juices, are very apt to disagree with some constitutions, but this tendency may in some measure be corrected by combining them with spices, aromatics, or salt. They evidently possess cooling and attenuating qualities.

The liquid part of our aliment next claims our attention. Drink is not less necessary for the support of life than eating; and for the purpose of regulating the proportion of it, which is necessary for the solution and digestion of our food, we cannot adhere to a better rule, than to drink moderately when thirst requires it, and the body is not heated by exercise, but not otherwise. The liquors used with our food are either those which are fermented, or simple water; with very few exceptions, the latter is probably most congenial with the well-being of mankind, and is indeed, when good, of the greatest importance in diet.

> Nothing like simple element dilutes
> The food, and gives the Chyle so soon to flow.

The best water is that which is most pure, and free from any mixture of foreign bodies. Water is apt to take up parts of most bodies with which it comes in constant contact, and by this means is often impregnated with metals, or minerals of an injurious nature. Its purity is always best ascertained by its transparency, fluidity, lightness, and insipidity; and on these qualities its wholesomeness very much depends.

Rain water, as containing a great quantity of saline and other particles, and abounding with an immense number of animalcules and insects, cause it not to be very salubrious. Well water is more or less pure, according to the different strata of earth over which it passes; and, therefore, that which is obtained from wells sunk in a gravelly or sandy soil may be considered as wholesome, on account of its being cleared of impurities by filtration in passing through them. River water, if much in motion, and running over a stony bed, is very wholesome; but in its passage through large towns and villages it is apt to be rendered impure by the quantity

of filth, consisting both of animal and vegetable matter, which is thrown into it. Stagnant water, or that which is obtained from ponds and small lakes, is generally bad, soon becomes putrid, and consequently is unfit for drinking. Spring water is usually lighter and purer than any other, and is therefore entitled to a preference, when it can be obtained. Spring water, which descends from lofty hills through pure sand and flints, and rolls gently along over a similar bed, or rocks, leaves behind all its coarse impurities, and may be considered as a fluid crystal, and the beverage best suited for persons in good health.

Water, when of an impure nature, may be rendered fit for use, and perhaps wholesome also; and the ways of doing this, are either by filtering it through a stone of a soft and porous nature, as is frequently practised on board of large ships, and in most of our West India Islands, where rain water is received into large cisterns for the use of every family: by boiling it, and then suffering it to cool; and by distillation. This last in a very high degree tends to deprive it of its feculent gross particles. As a preventive of putrefaction, the best that can be employed for the crews of vessels bound on a voyage of any distance, is to have the staves of the casks well charred on the insides, previous to their being filled with water. In this way, water may be preserved perfectly sweet for some years. When the water becomes impure and offensive at sea, in consequence of the casks not having been charred previous to their being filled, it may be rendered perfectly sweet by putting a little fresh charcoal, reduced to powder, into each cask two or three days before it is tapped for use, or by filtering it through fresh burnt and coarsely pulverized charcoal.

The stomach is invigorated by pure water when taken cold, but may be relaxed by a frequent use of warm water: it has, indeed, been of late much the practice with some persons to take a glass of this fluid in a warm state during, or immediately after dinner, but I cannot recommend its adoption,—thinking it to be more likely to prove injurious than beneficial.

The drier our food is, the greater proportion of water, or any other fluid, will it require; and, of course, a diet of animal food demands a greater quantity of drink to accompany it than one which consists wholly, or principally, of vegetables. In all cases, the proportion of drink should not exceed that of our food, and water may be regarded as the best beverage to conjoin both animal and vegetable food, from its being least disposed to produce acescency. The state of the constitution will, in a great measure, determine the natural appetite as to the quantity of drink that may be requisite: thus a person of a phlegmatic habit has usually less inclination to drink than one of a sanguine or choleric temperament.

The influence of the season helps likewise to regulate our desire for drink: excessive heat calls for a large supply of liquid by increasing the evaporation from the surface of the body under the

form of insensible perspiration ; and it also suspends, in some measure, the activity of the fluid secreted by the glands of the stomach for the purpose of digestion, as the desire for solid food becomes considerably diminished : thus, the inhabitants of warm climates eat less in proportion than those of colder regions, but they require an almost constant supply of liquids.

The desire for drink must also be considerably affected by the mode of life : thus the laborious, in consequence of their exertions, keep up an increased perspiration or evaporation from the body, and require a much larger supply of drink than the sedentary and inactive : According, therefore, to the degree of exercise or toil of the individual at different times, will the call or desire for drink be greater, and the necessity also for an increased supply be proper.

Although drink is a necessary and essential part of our aliment, it should never be carried too far, either in respect to its proportion or quality. An excess of it may not be so injurious as that of food ; but it nevertheless weakens the power of the stomach, and greatly diminishes the action of the gastric liquor upon the food, thereby retarding digestion, and by an improper dilution, makes the food pass off too quickly ; on the contrary, too great an abstinence from drink is improper, as the solution of the food thereby becomes incomplete, and digestion impeded.

Some physicians and teachers of medicine have indeed recommended a total abstinence of liquid during a meal ; but they appear to have forgotten that every general rule must be regulated by circumstances. The best test of its necessity is afforded by the sensations of the individual, which ought not to be disregarded merely because they appear opposite to some preconceived theory. It is true that some persons can dine without drinking, and suffer no distress therefrom ; but in the majority of cases in which this plan has been attempted, we shall find that the individual takes his food without his accustomed relish, and that the process of digestion is more powerfully performed than if a moderate quantity of liquid had been swallowed. I therefore recommend a moderate use of whatever drink the person has been accustomed to during the continuance of his dinner, in preference to abstinence from it.

Good table beer, mild ale, and porter, composed of pure malt and hops, and well fermented, are all of them wholesome and nutritious beverages in moderate quantities, but are more or less so in proportion to the mucilage and saccharine principle contained in them. Malt liquor, when fresh, light, well hopped, and free from any deleterious drugs, which brewers are too apt to adulerate it with ; moreover not being too strong, but of a proper age, may be considered as a very good diluent, fit to be used at our meals of dinner and supper. Strong beer is rather too heady, and even in a small quantity is apt to produce intoxication in debilitated or emaciated habits ; an ale glassful after dinner may be serviceable, but not more. Porter, when genuine and free from adulteration,

may be drank with advantage in a moderate quantity, particularly by labouring people, and may be considered not only as a refreshing beverage, but a strengthening one. The common table beer is usually of a very weak nature, and in hot weather is very apt to become sour, in which state it cannot fail to excite flatulency, and colic pains.

Malt liquors may be considered as very useful and proper beverages for women who give suck, and for those also who are debilitated from continuing this process too long, owing to its nutritious quality in affording due supplies of milk. For persons of a bilious temperament, they do not, however, appear to be very proper, and with persons who are subject to flatulency, coughs, or inflammatory affections, they will be found in general to disagree. The tartness or hardness in ale and such other liquors, together with the injurious consequences thereof, may, in some degree, be obviated by mixing a little of the carbonate of soda with each glassful of the liquor at the time of taking it, and well stirring them together. Ales which are bottled, such as the Dorchester, Burton, and Scotch, being prepared from a larger proportion of malt, contain a considerable quantity of spirit, which is much increased by age, and on that account are of an intoxicating nature.

Sweet wort, or an infusion of malt in water, has been found by navigators to be an efficacious remedy both for the prevention and cure of scurvy. Probably the same, as likewise spruce beer, might prove advantageous in more simple cases of the disease, where the gums are loose and spungy, as also in other slight impurities of the blood. Either of them may be taken in the quantity of a pint, or more, daily.

Cider, which is well known to be the expressed juice of apples, is a beverage much used in some of the counties of England, but from its disposition to tartness and acidity, I think it cannot be looked upon as a wholesome drink. It is very apt to disagree with many stomachs, by producing flatulency, and occasionally to give rise to spasmodic colic, or what is called the dry belly-ache, owing to the malic acid having acted upon the leaden vats in which this liquor is usually made, and holding a portion of the mineral in solution. Cider is, however, a pleasing beverage in hot weather.

Wine, when used in moderation, proves generally grateful to the stomach; it warms and stimulates it to greater exertion; promotes, probably, a more speedy discharge of its contents, and from its immediate action, imparts a transient sensation of warmth and comfort; but when taken in an immoderate quantity, it produces intoxication for the time, and its exhilarating effects having subsided, it leaves the frame disordered, relaxed, and weak. Wine may be considered as the best of cordials, where its good qualities are not destroyed by too free and frequent a use. Most of the great drinkers of vinous and spirituous liquors, die of relaxation, debility, loss of appetite, tubercles and scirrhosity of the liver, or dropsy. Good wine taken in moderation (that is to say, to the ex-

tent of three or four glasses at, or after our dinner meal) cannot be injurious to any man who uses exercise to a sufficient extent, and perhaps half this quantity may suffice for women generally. In the aged and infirm, or the valetudinarian, as well as in certain diseases, such as the hysteric and hypochondriacal, low fever, palsy, and dropsy, where a gentle stimulus is required to invigorate the system, wine is a proper article of diet, and, therefore, a few glassesful of it may be taken daily with beneficial effects; but in all inflammatory disorders and asthma, a use of wine would certainly be prejudicial.

Most kinds of wine are liable to be adulterated by the dealers therein, and white wines are very frequently impregnated with some of the preparations of lead for the purpose of counteracting their tendency to acidity; and many lives, no doubt, are sacrificed to these nefarious practices.—These kinds of wine operate like a slow poison; they give rise to headaches, coughs, shortness of breath, pains and sickness at the stomach, colics, obstinate costiveness, and at last paralytic affections ensue, followed, perhaps, by convulsions and death.

When wines are impregnated with lead, the adulteration may be discovered by the following test. Put into a phial, 16 grains of sulphuret of lime, prepared in the dry way, and 20 grains of acidulous tartrite of potash, or cream of tartar. The phial is then to be filled with distilled water, and shaken for ten minutes, the clear liquor to be decanted, and kept in a well-stopped bottle for use. This, when fresh prepared, and a little of it added to wine in which lead is present, will give it a dark coloured precipitate.

The home-made wines of this country are seldom properly fermented, soon run into the acetous fermentation from not being sufficiently strengthened by a proper quantity of brandy added to them, and are very apt to occasion flatulency, and indigestion in the stomach and bowels.

An improper, as well as inordinate use of spirituous liquors, inflames the blood, corrodes the coats of the stomach, impairs digestion, destroys the appetite, and induces many diseases of the most dreadful kind, such as gout, scirrhus of the liver or spleen, dropsy, apoplexy, palsy, madness, and fevers of different kinds: it also impairs the judgment, destroys the memory, and produces intoxication. Such strong liquors were never designed for frequent use. The spirituous liquors most made use of, are brandy, rum, and gin. The first of these is supposed, when pure, to contain nine parts of water to about seven of spirits, being distilled from the refuse of grapes. The common gin is the product of malt and oil of turpentine by distillation, after due fermentation in water; and rum is made from the fermented juice of the sugar cane, conjoined with the skimmings obtained in the process of converting the fresh juice into sugar, and likewise the molasses or treacle. All these are added to a certain proportion of water, and allowed to ferment, when

they are distilled, and a very strong spirit obtained from them, which is afterwards reduced in strength.

Of all the ways in which spirituous liquors are used, that of drinking them in the form of drams is the most injurious; and although, perhaps, it may be a slower way of destroying life than by taking a dose of any active poison, still in the end it will be attended with that direful effect. The habit steals on imperceptibly with many, and under any depression of spirits, they have recourse to it; but one dram begets a necessity for another, and at length the indulgence becomes unlimited, and the vice uncontrolable. The constitution soon shews its effects; the appetite is destroyed, digestion impaired, lowness and dejection of the mind with tremors of the nerves ensue, the face is blotched, and the nose red and beset with bumps, nausea, vomitings, frequent eructations, flatulency, and great disorder in the biliary organs take place; the liver becomes enlarged, indurated, and tubercular, and at last dropsy manifests itself, if the patient is not previously cut off by apoplexy or palsy.

Where wine or malt liquors disagree, and become acid on the stomach, as is the case in some constitutions, a little brandy, or any other spirit, diluted with six or eight times the quantity of water, may be used *occasionally* by way of cordial or beverage, but not otherwise. It is, indeed, my firm opinion, that the less of any kind of spirituous liquor a person takes, so much the better; and when any is made use of, it should be always in a state of sufficient dilution. Strong and spirituous liquors, freely indulged in, become a certain, though slow poison.

It does not seem easy to determine which of the two, viz. opium or spirituous liquors, by being improperly used, proves most detrimental to the human constitution: unluckily, the victims who addict themselves to either, are insnared by a habit which they find it impossible to relinquish; because the constitution, when habituated to a strong stimulus, becomes incapable of carrying on the functions of life without continual excitement, which of itself brings on debility and premature decay.

The speedy effects which opium, or indeed any of its preparations, is observed to have on those persons who take it habitually, are an exhilaration of animal spirits; and from a dosing and depressed state into which they sink after passing the usual time of taking the dose, they become alert and cheerful; but those who accustom themselves to this drug are of a yellow complexion, look much older than they really are, lose their appetite, and their bowels are invariably constipated. Those who indulge in a free use of strong and spirituous liquors have but little desire for food after a time, the liver becomes diseased (being either beset with tubercles, or indurated, scirrhous, or enlarged), the countenance is tinged of a yellow hue, general debility ensues, and dropsy at last destroys life. Palsy is often also the consequence of a continued course of such intemperance.

As an article of diet, none is more generally used than tea, and much has been said and written about its ill effects; but where

these arise, they may, I think, more properly be attributed to an improper use of it than to any injurious qualities in the herb itself. It has by some been supposed to produce a relaxing and debilitating effect on the stomach and other digestive organs; but from its apparent astringency, it incontrovertibly possesses rather a tonic power, and we may conclude that the stomach is invigorated by its use, when an infusion of it is not drank too hot.

It appears well suited to cleanse the stomach in the morning, preparatory to the more substantial meal of dinner, and when taken in moderation, as well as not too warm, it is a delicious diluent. It seems to promote perspiration, and to rouse the mind to a state of action when torpid either from severe exercise or fatigue of body. Tea is nearly the universal breakfast in many parts of the world, but particularly in the United Kingdom and its colonies; and the morning (in my opinion) is the most proper time of the day for using it, for when taken with freedom late in the evening, it is apt, in persons of weak and tender nerves, to occasion some interruption to sleep. Beyond doubt, there are many who experience this unpleasant effect from partaking of a strong infusion of this herb towards the decline of the day, and particularly of what is known under the appellation of green tea. Good tea, taken in a moderate quantity, neither too strong nor too hot, and with a proper proportion of sugar, and either cream or milk, may nevertheless be considered not only a pleasing and grateful beverage, both morning and evening, for the generality of persons, but also a salutary one. When taken too warm, and in too great a quantity, it may, like other warm fluids when too freely used, weaken the tone of the stomach, and give rise to, or considerably aggravate, nervous affections. Some persons, under the idea that their stomachs are weak, and that tea proves injurious to them, are much in the habit of adding a little brandy to it; but it is a very bad practice, and ought not therefore to be adopted. A few grains of powdered ginger will be far more innocent and appropriate.

An infusion, or decoction of the coffee berry somewhat toasted, has been much used as an article of diet both for breakfast and in the evenings by many nations; and effects of an equally injurious nature have been attributed to this beverage as those of tea, but perhaps as undeservedly. Coffee, when duly prepared, and mixed with a proper proportion of milk or cream, and sugar, usually sits easy on the stomach, if not taken too hot, or in too great a quantity, and has been generally considered very materially to assist the concoction, or digestion of other kinds of food; for which reason, those who reside in foreign countries usually take one or two cupsful of this pleasing beverage very soon after dinner, and previous to their rising from the table, instead of sitting at it for some hours, as Englishmen are accustomed to do, for the purpose of using wine in a very free manner.

Coffee certainly possesses a powerful antispasmodic, as well as sedative quality, and is likely therefore to prove beneficial to per-

sons of a hypochondriac or hysterical disposition. A particular strong infusion of it, (such as about an ounce to a cup of water, and without milk or sugar) has frequently been found to relieve the oppressive respiration which accompanies asthma, as well as to shorten the fit. Coffee is also known to afford very considerable relief in those distressing sensations commonly denominated nervous, as likewise in headachs or nausea occasioned by a debauch, or drinking too freely of vinous and spirituous liquors.

Chocolate is made from a nut of about the size of a large bean, which grows on the cocao plant, mixed up with spice and other ingredients. When boiled in water with the after-mixture of milk and sugar, it supplies a nourishing and wholesome article for breakfast; but being of an unctuous nature, from the quantity of vegetable oil contained in the nut of the cocao, it is apt to cloy weak stomachs, and cannot be taken therefore in any quantity, or for a continuance. As an aliment it is, however, of a very nutritious nature, and well adapted to the aged, infirm, and such as are in a convalescent state. The chocolate which is made in America and the West Indies is far preferable to that which is manufactured in Great Britain, the former being the genuine nuts ground up with a small quantity of spice; that of the latter, some portion of the nut adulterated with other beans, and mixed up with oil of almonds or butter.

What is vended in the shops under thē name of cocao, consists of small particles of the nut mixed with the husks, and is, therefore, not of so oily a nature as chocolate. When cocao is boiled up with water and milk, and then sweetened, it forms a light and very pleasant article of diet for breakfast, and is better adapted to weak stomachs than chocolate, by its being less unctuous or greasy.

The nutritious qualities of sugar are universally acknowledged, and its antiputrescent powers are very evident on meat, which it will in a great degree preserve from putrefaction. It is now, indeed, become a necessary of life, is very wholesome, and, if not used to excess, may be considered as serviceable in assisting digestion. When partaken of immoderately, it is apt to enter into an acetous fermentation, and thereby disorder the stomach and bowels.

Honey is another article of diet, much used by many in preference to sugar; but it has the disadvantage of readily running into a state of fermentation, at which time a quantity of air is disengaged from it, which not only causes an uneasy distention of the bowels, but in some constitutions, is apt to produce gripings and a purging. From its balsamic and lubricating qualities, it is found very useful in coughs, sore throats, &c., and, in combination with acids, forms an agreeable gargle.

Eggs, meat, particularly what has been salted and dried, such as ham, tongue, &c., are articles frequently introduced at the breakfast table, and, perhaps, they be may partaken of with impunity by

farmers, and those who use very active exercise; but they must unavoidably prove injurious to such as lead a sedentary life, or whose digestive powers are any way weakened.

Having noticed in the forgoing pages the different articles of aliment usually employed for breakfast and dinner, it may be expected that I should also notice those which are most appropriate for supper. The late hour at which all those who wish to be considered as moving in the higher circle of society, dine, renders supper a very unnecessary meal, tea and coffee being served up to such persons in their stead; but persons in a more humble station of life, as well as those who labour hard and dine at an early hour, may find it necessary to take something by way of nourishment towards the close of the evening. To all such I have to recommend, that their supper may be taken an hour or two before they retire to rest, and that it be made sparingly of what will sit light on the stomach, carefully avoiding what may prove heavy and difficult of digestion; such as toasted cheese, eggs boiled hard, and animal food of all sorts, particularly those that are salted and dried, as hams, tongues, &c. In some constitutions, however, a very small slice of animal food at supper conduces more to sound sleep than an empty stomach; but this peculiarity may possibly arise from mere habit. In my opinion, nothing can be more appropriate for supper, when such a meal is deemed really necessary, than a small basin of gruel, with a bit of bread or a biscuit.

As to the most seasonable times of taking our meals, I have only to observe that, in my own opinion, we should breakfast about an hour after rising, which should be early, having in the mean time freely partaken of the morning breeze; dine about three or four in the afternoon; and either take tea or coffee about eight in the evening; or, instead of this, substitute some light supper as before pointed out. If dinner be eaten at the period specified, the equivocal entertainment, called luncheon, is superfluous; but if taken at six or seven in the evening, which are the usual hours in high life, this extra meal is advisable.

Dining at an early hour is best adapted to elderly people, because it affords a timely replenishment, before the evening decrease of the vital powers, and which naturally precedes the hour of rest. It is also not only a fit time for the principal refreshment, but the custom tends to prevent intemperance; while late hours, and a consequent state of exhaustion, demand, or seem to justify, an excessive indulgence in strong drinks, and in variety of food.

OF DIET UNDER A DISEASED STATE OF THE BODY.

If it is necessary to pay a proper attention to diet when in health, it is still more so under disease, and the forms suited to the latter are next to be pointed out.

LOW OR FEVER DIET.

This may consist of panado, gruel, arrow root moistened with milk, plain bread pudding, salep, tapioca, calf's feet jellies, roasted apples, chicken or light veal broth; and where the fever is on the decline, and is accompanied by considerable debility, beef tea.

Arrow root being rather too expensive an article for the use of the poor under a diseased state, potatoe starch, and flummery made from the fermented refuse of oatmeal, may be considered as a cheap and good substitute for the diet of the sick poor.

DRINK.—Toast and water, lemonade, thin gruel, barley water gently acidulated with orange or lemon juice, common tea, or that made from balm or mint; also milk diluted with water.

Owing to prejudice, the use of milk has been much interdicted by professional men in fever, but there are few cases of this disease, where so bland, nutritive, fluid food, if the patient can take it, is improper. Milk has many advantages over other food usually offered to the sick. It needs no preparation, it is easily procured, and the time taken up by the nurse in the cookery of various, often unpalatable and ill prepared slops, sometimes in the sick room, which on that account becomes more heated than is proper, or filled with steam, may be often better employed in giving a more general attention to the patient. For the poor, this food is more readily and cheaply procured than any other, and would save much time spent in preparing other articles of diet, which can ill be spared in poor families. Milk, when cold, and somewhat diluted with water, may be taken to allay thirst in the height of the paroxysm of fever, full as well as any other fluid; at the same time that it conveys some nourishment to support the strength of the patient through the subsequent stages of the disease.

CONVALESCENT OR RESTORATIVE DIET.

Calf's feet jellies, bread or rice puddings, poached eggs, mutton broth, fowl, rabbit, lamb, or other light animal food, oysters, if fresh, &c.

DRINK.—Fresh table beer, porter, wine diluted with a proper quantity of water. If these disagree, very weak brandy and water may be substituted.

GENEROUS OR FULL DIET.

Meat soups, vegetables, mutton, beaf, veal, lamb, &c. chickens, capons, turkey, oysters and other shell fish; rice or bread puddings, &c.

DRINK.—Porter, mild ale, brisk cider or perry. Wine, in a moderate quantity, either in its pure state or diluted with water.

OF AIR.

Air is the principal medium by which animal life is supported; and so necessary is this fluid for the purpose, that life cannot exist a moment without it, as is very evident by placing an animal in the exhausted receiver of an air pump. Air is a colourless, transparent, heavy, and elastic substance; and in its common state, is combined with a variety of heterogeneous substances, and not a simple elementary substance, as was formerly supposed. It is a compressible and dilatable fluid, covering the surface of the globe to a very considerable height, and has generally been expressed under the term of atmosphere.

The recent discoveries of Chemists have taught us, that the atmosphere consists of three different species of air, viz. pure respirable vital air, or oxygen: azotic or phlogisticated air; and the fixed aërial, or carbonic acid air. The first consists of about 27 or 28 in an hundred parts; the second of 72 or 73 in an hundred; and the third, of about one part only in an hundred.

Oxygen or vital air is the most general agent in the operations of nature; exists in combination with various substances; and it is by their decomposition that it may be extracted and procured. All acids have vital air for their basis, and it has been discovered by Dr. Priestley and others, that vegetables exposed to the light of the sun, emit oxygen. It is the only gas proper for respiration; hence it is termed vital air. This air, mixed in a certain proportion with atmospheric air, has been exhibited with some success in putrid fevers and many cases of debility.

Azot or phlogisticated air, is perfectly irrespirable; it is produced by the change which atmospheric air undergoes in the process of combustion, putrefaction, or respiration, whether these changes be effected by nature or art. Azot is lighter than atmospheric air, instantly extinguishes burning tapers, and acts with great energy and rapidity in destroying the life of animals.

Hydrogen gas, or carbonic acid, possesses all the more obvious qualities of air, and exists in the atmosphere, of which it is a small part. It is found in a state of gas at La Grotta Del Cani near Naples, as well as at some other parts on the Continent, and in various subterraneous places, such as tombs, cellars, wells, necessaries, &c. It is also disengaged in the form of gas by the decomposition of vegetables heaped together; by the fermentation of wine or beer; and by the putrefaction of animal matters, &c. It exists in a state of combination in lime stone, common magnesia, alkalis, &c. It is unfit for respiration in a pure state.

Atmospheric air is most congenial for the purposes of respiration and animal life. It has an uncontrolable power over the vegetable as well as animal creation: for no plant can be nourished, nor will any seed germinate, which is totally excluded from it. Air, however, may become corrupted, or rendered unfit for respiration by

various means. Whatever greatly alters its degrees of heat, cold, moisture, &c. in a great measure deprives it of its salubrious properties. When it is too hot, it dissipates the watery parts of the blood, exalts the bile, renders its secretion superabundant or acrid, or perhaps both ; and gives rise to inflammatory, bilious, and putrid fevers, as well as to cholera morbus, &c. Very cold air gives a check to perspiration, constringes the solids, and condenses the fluids, occasioning coughs, catarrhs, inflammatory affections of the throat and chest, and, not unfrequently, the rheumatism. Air that is too moist, destroys the elasticity of the solids, induces a lax fibre and phlegmatic constitution, and disposes the body to intermitting fevers, dropsies, hypochondriac and hysterical affections.

Of all the various ways in which air may become corrupted and rendered unfit for respiration, none perhaps are more calculated to effect this change than by many people being confined in one apartment, assisted by the burning of fires, and a great number of lighted candles or lamps, without due ventilation. Air, thus deprived of a free circulation, heated, and deteriorated, soon becomes unwholesome and unfit for respiration ; hence, delicate persons are very apt to faint, or become sick in crowded assemblies of any kind, or in any place where the air is injured, not only by the breath of many persons, but by fires, candles, or the like.

I am induced to think that the use of gas (and particularly that arising from coal) in dwelling-houses, renders the air injurious to health ; for the lymphatics have the power of taking up gaseous substances, and it must be evident, that however slow the process on a strong constitution may be, the hydrogenous properties of such gas as supplies the lamps now in use in shops and dwelling-houses, must produce injury to the lungs, and from them to other parts of the human frame. It has, however, been lately discovered that a much purer and more innocent gas may be obtained by substituting peat instead of coal.

The air of cities and large towns, where a great variety of manufactures are carried on, (such as London, Bristol, Birmingham, &c.) with a crowded population, is not only breathed over and and over again for a continuance, but is also loaded with smoke, sulphur, and other exhalations, besides the effluvia constantly arising from slaughter-houses, privies, dunghills, and common sewers. To remedy and prevent the air from being deteriorated and injured thereby, the police officers should be careful to enforce the strictest attention to cleanliness ; and take due care themselves that the streets be daily cleared of all filth and rubbish ; that the offals from slaughtering-houses be not suffered to accumulate ; and that the common drains and sewers be frequently opened, and kept clear from any obstructions.

The having church-yards in the middle of populous cities is, beyond doubt, a pernicious custom ; for to a certainty thousands of carcases in a state of decomposition and putrefaction, so near the surface of the earth, in a place where the air is much confined, as

is the case in all large and populous cities, cannot fail greatly to assist in tainting it; and when such air is inhaled, it will be likely to occasion diseases. Most of the Eastern nations bury their dead at a considerable distance from any town, and the same practice is adopted by the Russians at Petersburgh, by the command of the Emperor, their dead being interred at some miles distant from that city; and I believe that the same custom is adopted throughout the greatest part of the empire.

The practice of burying within churches is a very bad one, and ought to be discontinued: if ever admitted, it should only be when the body is inclosed in lead, and this well soldered, so as effectually to prevent the escape of the effluvia arising from the putrid body. Churches are, in general, moist and damp, and very imperfectly ventilated, which render them very unsafe places for persons of a delicate constitution.

Air is sure to become corrupted and unwholesome wherever it stagnates long; hence the low, dirty, and close habitations of the poor, as well as jails, prisons, work-houses, and hospitals, where the strictest attention is not paid to ventilation and cleanliness, and a number of persons are crowded together, may be considered as lurking places, in which typhous and other malignant fevers are likely to be generated, and from thence are frequently communicated to those who visit them or are within the sphere of their influence.

No house can be wholesome where the air has not a free passage through it: for which reason, houses ought to be daily and properly ventilated, by opening the windows and doors, and admitting a current of fresh air into every apartment. Instead of making up the beds as soon almost as people rise from them, the different coverings ought to be turned down, or be wholly taken off, exposing both the bed and them for some time to the fresh air.

In jails, hospitals, ships, &c., where this process cannot be gone through, the foul air may be expelled, and fresh air introduced by means of ventilators, which are a very salutary and highly useful invention. In all places where numbers of people are crowded together, a strict attention ought to be paid to cleanliness, and a free ventilation.

If fresh air is necessary for those in health, it is still more so for the sick: nothing indeed is so beneficial to them as fresh air, and it is the most reviving of all cordials, if admitted into their chamber gradually, which is best done by throwing open the door, and raising the sashes of the windows in the contiguous apartments. Where the sick are labouring under fevers of the typhous and malignant kind, dysenteries, or other diseases of an infectious nature, we cannot pay too strict an attention to a free ventilation, both for the benefit of the sick, and those who are in attendance upon them.

The air of large cities or great towns should be avoided as much

as possible by persons in a delicate state, and particularly by those who are consumptive or asthmatic, or who are of a nervous temperament of body. When unavoidably obliged to remain in the like situations, such persons should go as often as they can into the open air, and keep their houses properly ventilated by a frequent admission of fresh air into them.

Houses surrounded with plantations or thick woods, as well as those which are situated in low marshy soils, or near large ponds or lakes of stagnated water, should always be looked upon as unhealthy; for the air is not only rendered moist and damp thereby, but is apt to be loaded with exhalations, in the latter instance, which give rise to dangerous and fatal diseases.

The effects of hot, cold, and moist air, are daily conspicuous to our senses. When the weather becomes warm, the muscular fibres are relaxed, and when it is cold, they are rigid and contracted, and the power of cohesion is increased so as to affect even the hardest metals, their dimensions being somewhat altered. Extreme heat will dissolve them, and extreme cold will harden them and render them brittle; which clearly shows that the cohesive quality of all bodies varies with the degree of heat or cold to which they are exposed.

The weight of air which our bodies sustain at different seasons is very great. That which presses on the body when the mercury is highest in the barometer, is said to be equal to 39,900 pounds troy weight; and even under the least degree of pressure from the air, is thought to be equal to 3,982 pounds troy. As the body is, therefore, necessitated to sustain so immense a weight, and of a magnitude so great at one time more than another, we cannot be surprised that our health should become affected by the various changes of the weather, and that frequently in a sudden manner. It is evident, that air is so closely connected with health and life, that it is impossible the animal functions can be properly carried on, even by the most vigorous and athletic constitutions, where a due attention to it is treated with indifference or neglect.

The reason why we are enabled to walk on earth with safety, instead of being crushed into it by the great weight of air which presses on our bodies, is, that springs of every kind expand or contract until they arrive at a state of equilibrium with the force that is acting upon them. Thus, notwithstanding the body of a man is calculated to bear so great a pressure as has already been stated, yet the spring of the air contained within the body, exactly balances or counteracts the pressure from without, and renders him insensible of the existence of any pressure at all; and the spring and pressure of air will thus balance each other in all cases, except when the communication is cut off, and the natural equilibrium destroyed by some disturbing cause.

Although a man in a state of nature or savage life is capable of bearing all the vicissitudes of weather and climate; although his stomach is capable of digesting most kinds of food, if its action has

not been impaired by intemperance, and although he is capable of sustaining the severest bodily exercise and labour, when he has been inured to it from early life, yet it must be evident that the man who has been nurtured in the lap of ease, and brought up from his earliest infancy with care and tenderness, will more readily feel the effects of the most trivial hardships, or be liable to take cold at every sudden change of the air, and that the least deviation from his accustomed rule of temperance, may tend in a peculiar manner to induce some kind of indisposition.

It is, therefore, evident, that to lay down a set of rules universally applicable to the state of every individual, is impracticable. It will be best for every person to study his own particular constitution, by which only he will be enabled to draw his conclusions, and discover those particular and positive effects which the different states of the atmosphere produce on the human frame, and learn to improve his health.

It may, however, be worthy of mentioning, that the tender and infirm very materially feel the oppressive influence of hot, sultry weather; and thus it may be accounted for, why people of a nervous temperament are very liable to those diseases which arise from relaxation, and a preternatural degree of heat, such as sudden faintings, convulsions, and hysterical and hypochondriac complaints. If along with heat there is a combination of moisture, a disposition to fever, as well as to malignant and putrid disorders, may be generated. When the heat is excessive the perspiration is apt to be very copious, and the cold following in the evening after a hot day, the perspiration is suddenly checked, and thrown inwards, and thereby gives rise to fevers, pleurisy, peripneumony, and other diseases.

On the approach of bad or wet weather the air becomes heavy, and is found considerably to affect the animal spirits of many persons. As it loses its elastic force without, it loses it also within us; hence the strength is somewhat diminished, the body becomes dull and somewhat oppressed, the spirits sink, the circulation is languid, and the patient complains of head-ache, sickness, and a great variety of other disagreeable and gloomy sensations are produced, particularly among persons of a nervous temperament.

By cold air, the human body is considerably contracted and rendered more compact; which is very obvious by observing that the same clothing which in summer sits tight, will in the winter be too large. In proportion, therefore, as the external heat is diminished, it would appear nature intended that the internal heat should be increased thereby. In winter the blood is much disposed to inflammation; and becoming, in some measure, obstructed in its passage through the lungs, produces coughs, pleurisy, inflammation of the organs of respiration, rheumatism, and inflammatory sore throat. By paying attention, however, to a proper degree of clothing, and taking particular care that a due proportion of exercise be not neglected, cold may be rendered less hurtful to the body, and the risk

of incurring these dangerous complaints in a great measure be obviated.

The effects of extreme cold are, however, sometimes destructive to the human frame, as in northern countries persons have been known to drop down suddenly, and be deprived of life without any previous symptoms of disease. The loss of various parts of the body in persons of the most healthy constitution, by the effect of extreme cold, is well known. The toes, fingers, lips, and nose, are frequently so far exposed to its effects, as to induce a mortification in these parts.

There is no change throughout nature more pernicious either to animal or vegetable bodies than from extreme heat to intense cold, or from freezing to sudden thawing, and the opposite of these. Hence, it has been observed, that irritating coughs are never so prevalent as when there are sudden alterations of the weather, and when the air, after having been very cold, suddenly becomes warm and damp, and after that assumes a considerable degree of coldness again. These transitions occasion a smaller quantity of matter to be thrown off by perspiration, and the lodgment of a greater proportion of fluids upon the internal parts, which become loaded and obstructed; hence catarrhs, diarrhæa, and many other diseases.

When any ordinary change of external temperature is made gradually, such is the constitution of the healthy human frame that it bears it with impunity; but when it happens more rapidly, danger arises, proportioned to the suddenness of the event. Even the slow annual change of season, in the degree which we experience in the latitude of Great Britain, produces some diseases, that are chiefly observable in the spring and autumn: the quicker daily change causes many more from the chills of night alternating with the heat of noonday.

The most dangerous, however, of all are those rapid and violent fluctuations which arise from the artificial modes of influencing temperature by the close rooms and fires of refined life, as also by the clothing. There are many thoughtless persons who will rush out into the freezing air from a room heated to the temperature of India, or after having been warmly clad throughout the day, will go out into the cold damp air of night in the flimsy dress of a ball-room, with their bosoms uncovered, and their necks and shoulders perfectly bare; for such is the prevailing fashion among women nearly of all ages. They are never *more dressed*, according to their ideas, than when thus equipped for some place of amusement, although, in fact, they very nearly approach a state of nudity. It is by such imprudences, and the changes of temperature to which they become liable, that so many thousands of the inhabitants of Great Britain and Ireland are annually cut off by one disease or another, but particularly by pulmonary consumption.

But we are now so accustomed, in our united kingdom, to hear of colds, coughs, consumptions, rheumatism, and a long train of other

diseases of a similar nature, that we have nearly been brought to consider them as the necessary attendants of our insular situations, the unavoidable scourges of our climate and land, the existence of which we may deplore, but against which it is almost useless to employ any precaution. It is a positive fact, however, that most of our winter maladies derive their origin from sudden and considerable vicissitudes of temperature, and may, perhaps, be avoided by paying due attention to the following rule: viz. To keep the temperature of the atmosphere which surrounds us as uniform as possible, and when a change is unavoidable, to make it gradually, and not suddenly. A due attention should, therefore, be paid to our clothing, and management in other respects, on quitting our houses, or coming out of any crowded place of public resort in cold weather. Persons of a delicate constitution will find it much to their advantage to pay attention to the changing of their clothes according to the vicissitudes of the seasons, or even, indeed, to those of the same day, proportioning not only the quality, but quantity thereto.

As our bodies are readily acted upon by every sudden change of weather, as from heat to cold, and the reverse of this, every precaution should be taken, for the purpose of preventing any sudden check to perspiration; and it should be a fixed rule, to avoid all rapid transitions from one extreme to another, and never to remove from a room which is highly heated, to a cold air, or fresh breeze, while the body remains warm, or till the necessary change by additional clothing has been previously made. If, at any time, the body should be greatly heated during the warm weather, it will be sure to suffer by going into a cellar, ice-house, or cold bath, or even by siting on cold stones, or ground that is damp. Severe colds, pulmonary consumption, rheumatism, and many other maladies of a severe nature, have been brought on by such imprudence, and even speedy death has been the consequence of such a transgression.

The spring season is, in general, the most healthy: spring and autumn are most congenial with the delicate frames of children and young persons; the summer and beginning of autumn agree best with the aged, and for those of a middle age, the close of autumn and beginning of winter seem best adapted for the enjoyment of health.

It is well known that our bodies are materially affected by winds as well as air: indeed, the former are nothing more than the air put in motion. A long continued north wind is generally considered as wholesome, because it purifies the atmosphere from noxious vapours, and renders it, at the same time, serene and dry; imparting elasticity, activity, and vigour to the human body. It is, nevertheless, inimical to the tender frames of some people, who, from too great an exposure to it, become affected with coughs, fevers, and inflammatory complaints of the lungs and bowels. A south wind generally debilitates and relaxes the

body. An easterly, or north-east wind is generally cold and piercing in the winter; in summer, the most parching and hot. The valetudinarian should, if possible, during the prevalence of easterly winds, or a dry spring, change his apartments into rooms that have western or southern lights; and in wet seasons, when southerly or westerly winds prevail, he should adopt the contrary course.

Whatever may be the temperature of the climate, the air, in general, may be looked upon as healthy, provided it be pure and clear, and occasionally visited with the agitating and renovating power of wind; whilst, on the other hand, an air that is gross, or strongly saturated with animal, vegetable, or mineral substances, must be highly injurious to every constitution.

In the selection of a residence with a view to health, the following rules appear to be deserving of attention. If we have it in our power to choose our abode, a preference should always be given to a house situated on an eminence, the soil being gravelly, but not a high hill, and neither exposed to the extreme heat in summer, nor to the piercing cold of winter. The rooms should be lofty, and of suitable dimensions, as low, confined ones are injurious. In the summer, an apartment pointing to an eastern or northern aspect will be most desirable; whilst in the winter, that which admits the warm rays of the sun in a southern aspect, being the most dry and cheerful, should be preferred, as having a favourable influence on the spirits as well as health.

Surrounding houses too closely with plantations, or large trees whose foilage is thick, cannot fail to be injurious; for they not only obstruct the access of air and light in the day-time, and thus induce a dampness in the rooms, but there is exhaled from them very unwholesome effluvia during the night. Where there is any great concourse of water, the air must be damp, because the sun is perpetually straining from these waters moist dews and vapours through it.

Houses that are situated near large lakes of stagnant water, or in low marshy countries, are usually very unwholesome residences, and should not, therefore, be inhabited by those who regard the preservation of their health. Waters which stagnate, not only render the surrounding atmosphere very damp, but load it with putrid exhalations, which give rise to dangerous and fatal diseases, such as intermittent and remittent fevers, as also obstructions in the liver and spleen, not unfrequently followed by dropsy. Persons who are obliged to reside in marshy countries, such as the fens of Essex, Lincolnshire, &c., should make choice of the most elevated and dry situation they can find; and they ought to live generously, and pay a strict attention to cleanliness. They should avoid approaching the marshes by night, or any exposure to damp and cold air; they should shun melancholy as well as every excess of pleasure tending to weaken the body. It will be advisable for them never to go out fasting before sun-rise. In towns

and countries infested by marshes, the magistrates ought strictly to enjoin the frequent sweeping of the streets and washing of the kennels, the inundation of the sewers, and the daily removal of every kind of filth.

Mountainous situations are very apt to be damp, and have rains and snow on them when the vallies below are clear, serene, and dry: moreover, they are exposed to high and almost perpetual winds.

It may, in general, be concluded that the air of any place is salubrious where the water is good; and where this is pure and tasteless, the air, in general, is free from any offensive smell. Where sugar readily enters into a dissolved state spontaneously, the walls of the house are stained and changed in colour, the papering loose and detached, and metals acquire rust or verdigris on their surface; these are to be looked upon as presumptive evidences of the situation being damp, and therefore unwholesome.

The higher parts of a house are generally the most healthy, and, therefore, a sitting-room above the ground floor is entitled to a preference. All the rooms in a house should be daily ventilated by the seasonable admission of a proper current of air through them for a sufficient length of time. During the sultry heat of the summer months, it will not be safe to leave the windows of the bed-room which is slept in, open all night, as this practice can never be resorted to without some hazard, unless the person has long accustomed himself to it; and even then, the air coming in a current upon him is to be carefully guarded against.

By immoderate warmth, either by keeping large fires in our sitting rooms, or sleeping in very heated apartments, with doors and windows made what is called air tight, or having the fire-places closed by chimney boards, the body will become enervated. To avoid indisposition from these causes, it may be laid down as a pretty general maxim, that the temperature of a sitting-room should not exceed 60 degrees of Fahrenheit's thermometer, nor that of the bed-room 50, that being the medium degree of our climate, and that in which the several operations of the body seem to be performed with the greatest facility and alertness. To live in a temperature too much heated, will be injurious.

As the warm weather is progressively succeeded by a state of greater cold, we should endeavour to inure ourselves to the effects of these changes. By these means, if we use moderate exercise, and are properly clothed, we shall neither feel the cold unpleasant, nor will it cause any obstruction of the necessary perspiration.

OF EXERCISE.

The labourer is apt murmur that he is necessitated to earn his bread by the sweat of his brow, and, looking round on his superiors, he repines at his condition and station, considering that as hard and afflicting, which infinite wisdom has destined to be absolute, if not the only method by which he can be put in posses-

sion of the chief of all earthly blessings,—a sound body and a quiet mind; for those whom poverty obliges to labour for their daily bread, are not only the most healthy, but, all things considered, generally the most happy of mankind.

> Toil, and be strong. By toil the flaccid nerves
> Grow firm, and gain a more compacted tone;
> The greener juices are by toil subdu'd,
> Mellow'd and subtiliz'd; the vapid old
> Expell'd, and all the rancour of the blood.—*Armstrong.*

The industrious labourer, who is under the necessity of earning his daily sustenance by personal exertion, commonly enjoys good health; he eats his scanty meal with a good appetite, unassisted by provocatives, which his active and athletic body, by proper exercise, is soon enabled to digest; and at the return of evening he retires to undisturbed repose, where sound and uninterrupted sleep recompenses for his toil. Health makes his bed easy, and his wearied limbs, recruited by sound repose, fit him for the labour of the ensuing day. As his wants are few, he is nearly a stranger to care and solicitude; and his progeny are partakers with him in the same inheritance. On the other hand, the sluggard is exposed to a variety of temptations; and that indolence and inactivity are the source of much immorality, we may soon be convinced of by casting our eyes round the world. They also lay the foundation of many painful diseases, and at length the mind, as well as the body, dwindles into a state of torpor.

Indolence impedes the organic functions, undermines the fountains of health, and gradually but invariably leads to disease. Accordingly we find that those persons who are obliged to labour for their livelihood are generally strangers to the gout and some other disorders, which may be considered as the offspring of good living and indolence. It is an established law of nature, that moderate labour or due exercise is essential to the preservation of health; and although the energies of life may be impaired by excessive labour, and premature old age, with its many infirmities, be the consequence, yet the decree of the Deity that man should earn his bread by the sweat of his brow, may be considered rather as a blessing than a curse in our present state of existence.

Let us be ever so attentive to our regimen and other circumstances, yet it is impossible to keep ourselves in a healthy state if unaccompanied by due exercise: there is no substitute which we can appropriate for the non-observance of this salutary branch of personal management. Nothing so effectually prevents indigestion, and consequently strengthens the solids, as exercise; but unless it be duly and properly persevered in, and our bodies daily habituated to it, we cannot experience all that benefit which accompanies its use. In the formation of our frames, and from the nature of our constitution, it evidently appears to have been the positive intention of Providence to create in us, for our well-being, an absolute necessity for exercise. Our love of motion is surely a strong proof

of its utility, and nature implants no disposition in vain. It seems, moreover, to be a law throughout the whole animal creation, that no creature, without exercise, should enjoy health, or be able to find subsistence.

Were men to live in an habitual course of exercise and temperance, there would be but little occasion for using medicines: accordingly we find that those are the most healthy who subsist by the chace; and that men lived longest when their lives were employed in hunting, and had little food besides what they caught. It has been remarked that all those who have attained a very advanced age have undergone great labour and fatigue in their younger years; such was the case with Parr and Jenkins, the two oldest men on record.

By an attention to exercise, the tone and vigour of the body are very much increased; the nervous energy, and also circulation of the blood, are materially accelerated; and this increased impetus of the blood through the whole system produces an effectual determination to the surface of the skin, and a free perspiration is the consequence. By the same means, the body is disposed to sleep, the appetite is increased, the tone of the stomach and other organs concerned in the process of digestion preserved, and the blood is determined from the interior parts; thereby preventing, as well as removing obstructions, and powerfully obviating any tendency to overfulness in the system.

Moreover, by exercise, the spirits are enlivened, as well as the body refreshed; and it is an undeniable truth that where it is neglected, the strength and energy of the whole machine gradually fall to decay, and a morbid irritability is induced, with a long train of those unpleasant symptoms which usually accompany chronic weakness. The natural powers of the stomach and intestines sustain particular injury, the appetite is vitiated, and the bile and other fluids employed by nature in the process of digestion, are very imperfectly secreted, or perhaps considerably obstructed: the muscular fibres of the body become relaxed and debilitated, the whole animal economy is disordered; and a train of nervous and hypochondriacal symptoms, together with gout, apoplexy, palsy, glandular obstructions, and many other complaints incident to inactive, indolent, and sedentary persons, come on.

Nothing but regular and sufficient exercise in the open air can brace and strengthen the muscles and nerves, or prevent the endless train of diseases which proceed from a relaxed state of these organs. The active and laborious are seldom the subjects of nervous diseases: these are the portions of the sons of affluence and ease. Riches, indeed, supply many indulgences, but they are at the same time accompanied by many evils; and thus are the good and bad things of this life pretty equally balanced.

Those who wish to enjoy health should use exercise as regularly as they take their food: they should walk a certain distance in the open air every day, or ride on horseback; and probably they may

find it to their advantage to employ some portion of the day besides in gardening, or some agricultural pursuit. The studious, and men of letters more particularly are required to attend to these points; for if study be united with a want of exercise, it infallibly proves injurious to health, and never fails to destroy the appetite and impair digestion; then costiveness, flatulency, crudities, head-ache, apoplexy, and palsy, are the certain consequences. Exertion of the mind and inaction of the body, when carried to excess, are destructive of the most robust health. An alternate mixture of daily and sufficient exercise, business and reading, enables us to allow rest by turns to the body and the mind; and keeps the faculties in due equilibrium, and in a state of progressive improvement.

To render exercise as beneficial as possible, it will be necessary that it be not too violent, and that moderation both in eating and drinking accompany it. Violent exercise, which either heats the body, fatigues it, or exhausts the spirits and muscular strength, is sure to be hurtful. Active exercise soon after eating a full meal, is likely also to be injurious: a state of quietude, therefore, for some time after dinner in particular, as being the principal meal with most persons, will be advisable, but nevertheless we should not indulge in sleep soon after eating. This custom some people practise, but it is an improper one, particularly for those of a full habit.

Exercise certainly gives strength and energy to the body, but it should not be carried too far, or be continued too long, as it may then be productive of mischief instead of benefit. It should be gentle and moderate, and when practicable, be taken in the open air. Another rule necessary to be attended to for rendering exercise advantageous is, that due care be taken that the body, when heated, be not suddenly exposed to cold, either by subjecting it to currents of air, or fresh breezes, or by drinking cold liquors of any kind. In warm climates, exercise should always be taken in the cool of the day, particularly in the morning.

We may consider exercise of the body as of three kinds. First, that of simple muscular motion, consisting in walking, or such employments as call forth the exertion of the limbs, as fencing, dancing, gardening, digging, hunting, shooting, cricket, playing at golf, bowls, or tennis, and the like. Secondly, that which is obtained by riding on horseback, or in any kind of carriage; and thirdly, that which may be given to the body by outward applications, such as frictions, either with the hand, a flesh brush, or a piece of flannel.

Exercises of the first kind are highly beneficial when the bodily powers will admit of them, as the mind being occupied therein adds very materially to the advantages resulting from them; yet, on account of their being more fatiguing and laborious, there are many instances where they are scarcely admissible, in which case, riding must be substituted in their stead. Of all the different species of exercise not taken on foot, that of riding on horseback

is certainly entitled to the preference, if the person is capable of using it. In nervous affections of all kinds, but more particularly the hypochondriac, as well as obstructions in any of the internal organs, it is more likely to be beneficial than any other, from the parts being universally shook by it, and such persons ought to pass two or three hours every day on horseback when the weather is not wet.

Next to riding on horseback, a preference should be given to an open carriage of some kind or other, as a person has the advantage of continually changing the air and breathing it pure, the importance of which must be obvious, as well as beholding the diversity of scenery and country.

It now and then happens, however, that the motion of either a horse or carriage, be it ever so expertly hung, is too much for the delicate frames of some invalids. In such cases, easy exercise may be obtained by sailing in a small vessel or boat, at proper times of the day when the weather is fine ; but when not so, swinging in a cot or hammock may be substituted.

A person who is prevented from taking exercise in the open air, by inclemency of the weather, or other causes, should by no means remain in a continued state of inactivity ; he should engage in some employment, or active amusement within doors. Where the taste and inclination extend to any mechanical pursuit, such as that of turning, &c. it ought to be indulged ; but where they do not, what are called dumb bells may be substituted for a considerable space of time each day ; or the person may play at billiards, or even at shuttlecock, rather than take no exercise at all.

In cities, the exercises which are most suitable to the habits of the people and their opportunities, are, for men, the practice of fencing, wrestling, sparring, and the gymnastics which have lately been introduced from Germany, and which were in the highest estimation among the Greeks in former days, and to which, in a great measure is to be attributed their fine healthy and efficient forms, which have come down to us in their statues.

The third species of exercise which has been mentioned, is that of frictions, and where the circulation is languid, and the motion of the other fluids sluggish, or there is an inability of muscular motion from any paralytic affection, these may be employed with much advantage, and in the latter instance, still more so, if conjoined either with electricity or galvanism. Frictions may be made either with a piece of flannel, the flesh-brush, or simply with the hand ; and the best time for employing them, seems to be in the morning, at the time of rising from bed ; for then the superfluous matter which is prepared for perspiration, is more readily brought to the surface of the body. In the application of this species of exercise, if we commence the friction from the extremities upwards to the body, we shall thereby accelerate the circulation, and propel the blood into the finer branches of the minute vessels.

In every stage and state of life, exercise is necessary for our

welfare and health, and it is equally as requisite for those of the female sex as for the male part of the creation. By food our bodies may be nourished; but if not assisted by due exercise to carry on the digestion of it with advantage, and help in throwing off the superfluous humours by perspiration, we must, unavoidably feel all the inconveniences of repletion and fullness in the blood vessels. whilst at the same time the body will be afflicted with many painful diseases.

Indolence, moreover, not only occasions diseases, and renders men useless to society, but promotes all manner of vice. Indolence, when indulged, gains ground, and at length becomes agreeable; hence, many who were fond of exercise in the early part of life, become somewhat averse from it when more advanced in years. This is the case with most gouty and hypochondriacal people, which, in a great measure, renders their diseases more untractable, if not incurable. Idleness may well be said to be the root of many evils; and I think we may safely alledge, that, on the contrary, a life of activity and industry is not only the greatest prompter as well as preservative of health at all periods of our mortal existence, but likewise one of the best guardians of virtue.

The age of sixty may in general be looked upon as the commencement of senility, and about this period of life it commonly happens that some signs of bodily infirmity begin to appear. To the constitutions of such persons moderate quietude is most suitable, since the springs of life in them are rather weakened than invigorated by excessive or severe action.

OF CLOTHING AND CLEANLINESS.

A necessary rule to be attended to for preserving the body in a proper state of health, is to take care to protect it from such effects as have a tendency to obstruct the perspiratory matter. In the sultry days of summer, every precaution should be taken that the body be not suddenly exposed to cold, when overheated by exercise, by throwing off a portion of our clothing, as some persons are apt to do. Another rule to be attended to, is to adapt our clothing to the climate, the different seasons of the year, and the period of life.

In warm climates, what is worn next to the skin should be made of cotton in preference to linen, as the latter, when moistened with perspiration in consequence of extreme heat, or any active exercise, is very apt to convey a sense of chilliness when the body becomes cool again. Shirts and drawers of calico will, therefore, be preferable to linen ones. As outer coverings, coats made of thin woollen substances, such as what is called ladies' cloth or cassemere, with breeches or pantaloons of dimity or nankeen, may be worn by men, together with hats of a white colour, and light texture. Muslins, chintz, and silks, are the most appropriate outer garments for females. A proper attention ought to be paid at the same time

to the situation of the person's residence, whether in a mountainous or flat country; to the frequency and violence of storms, and to the different periods of the day, avoiding, if possible, an exposure to the moist and damp air of the nights, but where this is unavoidable, clothing the body accordingly.

It has been mentioned that clothing ought also to be adapted to the season of the year; for what may be warm enough in the summer will by no means be sufficient for the winter. Our summer clothes ought therefore not to be worn too long, nor our winter ones put on too soon; and in making the change, it will be best not to do it all at once, but gradually; which precaution is more particularly necessary for those who have passed the meridian of life.

Another material rule to be attended to with respect to clothing, is to adapt it not only to the seasons, but to the vicissitudes of the weather at different periods of the same day. An attention to this point is particularly necessary in Great Britain, where the weather is so variable, and the transitions from heat to cold so very sudden at different times of the same day. In the spring and autumn these rapid changes are very apt to take place, and should be provided against by those who are unavoidably obliged to expose themselves either for the purpose of business or exercise.

Warm clothing is proper for the aged, but among the youthful it is not so necessary to cover the body with a quantity of clothes, because the blood circulates with due energy, and the perspiration is free; but in advanced life, when the circulation is more languid, and the skin rigid, it must be evident that the clothing ought to be increased. A defect of due perspiration is probably the cause of many of the diseases to which the latter period of life is subject; but this may in some measure be prevented by wearing next to the body those articles of clothing which are best calculated for promoting a due discharge from the skin by perspiration, such as those made of cotton, flannel, or fleecy hosiery.

In the summer and autumn, the former will be found most comfortable, and during the winter and spring those which are composed of either of the latter; and this mode of clothing should be adopted by both sexes. Females of a delicate constitution really require some under clothing in addition to what is usually worn; and I would therefore recommend them drawers or sliders of flannel, particularly to those who wear a single petticoat or so, that their shapes may be slim and tapering, and their persons accordant with the Grecian costume.

Robust persons are able to endure cold better than the delicate, consequently may clothe lighter; but the precise quantity of apparel which may be necessary for any person cannot be determined by reasoning. It must be entirely a matter of experience, and every person is the best judge for him or herself what quantity of clothes is necessary to keep him or her sufficiently warm and comfortable. The state so nearly approaching to absolute nudity, in which fashionable females now make their appearance in public, is

not only highly indecent, but must be very destructive of their health and personal comfort.

Whilst treating on clothing, I would recommend it to every person to be careful in observing that their linen is properly dried previous to its being put on. This precaution will be particularly necessary in the winter months, as washerwomen are then obliged to dry chiefly by the heat of a fire, and this is apt to be very imperfectly done. Many lives are annually sacrificed by persons putting on damp linen, as well as by sleeping in sheets not properly dried.

Another observation which I think it necessary to make on the present subject is, that due care should be taken to change the stockings and other clothing as speedily as possible after their becoming wet by any exposure to inclement weather, rain, snow, &c. Many persons are so imprudent as to neglect this very necessary change, and to suffer their clothes, after such an exposure, to dry on them, assisted, probably by going near a fire for some time; but such a practice is always attended with risk, and not unfrequently gives rise either to rheumatism, fever, pleurisy, cough, consumption, or some other disease of a dangerous, or even fatal nature.

As to the frequency of the change of dress, this might be regulated by the nature of the materials worn, by the state of the season, the vicissitudes of the atmosphere, and the situation, temperament of body, and age of the person. No maxims, on this head, need therefore be offered, as every individual can best judge for himself or herself on this head. In warm climates, most persons of both sexes are in the habit of changing their dress twice a day, particularly their body linen. Indeed, where such articles of dress are once soiled by copious perspiration, the speedy renewal and change is not only necessary for the sake of comfort, but also for the preservation of health; as when the linen has been much moistened by perspiration, in consequence of exercise, it is very apt to convey a sense of chilliness to the body when this is again placed in an inactive state.

No part of our dress should sit so close as to occasion pressure. In wearing cravats, stocks, necklaces, &c., they should not be applied any way tight about the neck, as in this way they obstruct the blood in its course from the brain, and thereby give rise to headache, giddiness, fainting fits, or apoplexy. Neither should our garters be worn too tight, as they thereby not only prevent the free motion and use of the parts about which they are bound, but likewise obstruct their equal growth and nourishment, and give rise to varicose distention of the veins, aneurism of the crural artery, &c. But the most destructive way of applying tightness is, that of squeezing the stomach and bowels into as narrow a compass as possible, by the close lacing of stays, for the purpose of moulding the figure into what is called a fine shape. Many women are sacrificed by this injurious practice; and a few coxcombs of the other

sex, dandies, or, accordant with the more modern term, exquisites, have of late rendered themselves ridiculous by wearing corsettes, and aping females in this respect. Tight lacing is attended with very injurious consequences, as the action of the stomach and intestines, the motion of the heart and lungs, and all the vital functions, are impeded; hence arise fainting fits, indigestion, costiveness, obstructed mestruation, coughs, consumptions, and many other complaints.

Personal cleanliness is chiefly effected by a frequent change of dress, but is much increased by ablutions of different parts of the body daily with water. Of these the head, face, and mouth, as well as the hands and feet, claim our particular attention. From neglecting to keep the mouth, teeth, tongue, and throat properly cleaned, the breath is apt to acquire a disagreeable taint. The teeth ought, therefore, to be cleansed after every meal, as the refuse of the food naturally settles about them, and in consequence of heat, rapidly become putrid, and in this state, proves injurious to them as well as the gums. Every morning the tongue should be cleansed by a whalebone or other scraper, and the throat be will gargled, and washed out with water.

The teeth are apt to become incrusted with tartar, which in time very much injures the enamel with which they are coated externally: it should not, therefore, be suffered to collect, but be removed from time to time. They should be washed every morning with a small piece of sponge, or very soft brush dipped in cold water, joining occasionally the powder of fresh prepared charcoal (see tooth-ache.) If any of the teeth have a tendency to caries or rottenness, or the gums are spungy and bleed, the mouth may be washed with equal parts of the tincture of myrrh and bark, somewhat diluted with water.

Attention to the feet is also very necessary, particularly in warm weather, and with those who from a peculiarity of constitution have them very moist. The perspiration proceeding from them in hot weather, and after much walking, emits a very disagreeable smell: they ought, therefore, to be frequently washed, but no means for stopping the discharge should be resorted to, as by drying it up, serious diseases might be induced. Great cleanliness by daily ablutions of the feet, and a change of stockings, are not only the most convenient, but the most salutary means of preventing all unpleasantries.

Ablutions with water may also be extended to other parts of the body besides those which have been mentioned; hence a bidet is a very appropriate article of furniture in every bed-chamber, and ought to be daily used by men, as well as women. When a habit of cleanliness is once established, no rules will be requisite, as the feelings of the individual will sufficiently point out to him what is proper in this respect.

Frequent ablutions, or immersions in water, are attended with highly beneficial effects, and may be considered as the most effec-

tual antidotes to the production of many of those distressing maladies which so materially tend to render human life uncomfortable. There can be no doubt that very many of the almost infinite forms of the diseases of the skin may be attributed to neglect on this point. The metropolis of England, indeed, is sadly deficient in establishments for bathing, both public and private; and when we consider how easily water may be procured, it is astonishing that the luxury of a bath is not to be met with in every large city, and that so few private families have one appertaining to their establishments. Cleansing the skin by rubbing, washing, and bathing it, may be considered as a very salutary operation, and is, indeed, of so great importance that it is nearly impossible for any person to be perfectly healthy who lives in the constant and habitual neglect of these means.

Where the person labours under no disease which is contradictory to the employment of a cold bath, this may be substituted in the summer and autumnal periods of the year for minor ablutions of the body; and bathing in the sea is entitled to a preference among the young and middle aged. Cold bathing does not, however, produce any considerable tonic effect upon old persons; and besides any sudden chilling of the skin repels the circulation from the surface of the body, and determines the blood upon the inward parts, which is always attended with some risk or danger to persons advanced in life.

To ascertain whether or not cold bathing is likely to be serviceable to the person who employs it, he has only to attend to the following circumstance. If after bathing, he feels a genial glow of warmth pervade the body, with an increased degree of vigour, he may be assured that it is likely to prove beneficial; but, on the contrary, if he feels a cold or chilly sensation remaining some time after, it should not be persisted in, as being unlikely to produce a good effect.

The best time of the day for cold bathing is before breakfast, but it may be used at any period of the forenoon, taking due care not to resort to it when the body is heated by exercise, nor immediately after a meal, on a full stomach.

Inuring children to cold bathing is generally productive of much advantage to them, particularly those who are perceived to be of a weak constitution, provided they labour under no organic disease. In conjunction with proper exercise, it is of all means the best calculated to make them strong and healthy, and may be considered as a powerful antidote against the rickets, scrophula, and many other disorders.

For elderly people tepid bathing will be more appropriate than the use of a cold bath, and will be found no less salutary than pleasant. A warm bath is a remedy of high utility where any check has been suddenly given to the perspiration by an exposure to cold or wet, and it proves very serviceable in many disorders.

such as inflammatory affections of the stomach and bowels, rheumatism, and various other diseases.

The topical, as likewise the general use of hot water in the form of vapour, is likewise a remedy of great utility in various complaints. Whenever the joints are become rigid, and the pain upon motion exquisitely severe, or where the muscles are contracted; and, indeed, in all protracted cases of any disease of the hip joint, lumbago, or sciatica, the vapour of hot water, properly applied, will seldom fail, in conjunction with other suitable applications, to prove a safe and successful remedy. The mode of applying it topically must be regulated according to circumstances. A large boiler, with a long pipe or tube affixed to it, forms a simple apparatus. By means of this, the parts affected may be steamed for about half an hour at a time, repeating the process twice or thrice a day.

When a general vapour bath is required, one constructed agreeable to the plan advised by the Honourable Basil Cochrane (see his Pamphlet on Vapour Baths) will best answer the purpose. The Russians are much in the habit of using the vapour bath, and their manner of doing it is simple. The apparatus consists of a wooden house, situated, whenever it is possible, by the side of a running stream. In the bath-room, there is a vaulted oven, which, when heated, makes the paving stones on the top of it red hot, and adjoining to the room there is a large kettle fixed in masonry for the purpose of containing boiling water. Round about the sides of the room are a row of benches. Light is admitted, but there are apertures here and there for permitting the vapour to escape, the cold water which is wanted being let in by small channels.

The heat of the bath-room is usually from about 114 to 132 of Fahrenheit's thermometer. Warm water is thrown from time to time upon the hot stones of the oven, by which means the heat is somewhat increased, especially in the upper parts of the building. The bathers recline on the benches in a state of nature, and they perspire more or less in proportion to the heat of the humid atmosphere in which they are enveloped. To promote perspiration the better, and completely to open the pores, they are at first well rubbed with the hands, and then gently flagellated with leafy branches of birch. The eastern nations, with the same view, adopt what is called champooing or kneading of the flesh, now and then interposing frictions. The Russians, after remaining awhile, quit the sweating bench, and wash the body with warm or cold water.

Cleanliness ought to be attended to in our houses, as well as in our persons and dress. It is well known that fevers of a malignant and contagious nature often originate among the inhabitants of close dirty houses, who breathe an unwholesome air, wear their clothes until they become very dirty, and take but little exercise out of doors. Where a number of persons are collected together under one roof, cleanliness is a point of the very highest importance, as it is a well-established fact that contagious diseases are

communicated by air which has become tainted, and which soon takes place by its being breathed over and over again, and its being further deteriorated by a want of due ventilation and proper cleanliness.

A strict attention to cleanliness is, therefore, highly necessary in work-houses, hospitals, gaols, and prison-ships. Where it is neglected in such places, a person in perfect health has a greater chance to be attacked by disease than a sick person has to recover from it. Few virtues are of more importance to society than general cleanliness, and it should be cultivated every where, and among all ranks of people. Those who are obliged to earn their daily bread by pursuing a dirty and unwholesome employment, might probably avert some part of the danger connected with it, by keeping their skin clean by frequent ablutions of their bodies with water, and changing their linen sufficiently often, taking care at the same time to keep their abode clean and purified by a free admission of fresh air into it daily.

OF SLEEP AND WATCHING.

For the purpose of recruiting the waste daily produced in the human body, and enabling it to perform every function properly, nature has wisely and beneficially determined that an adequate renovation should succeed this exhaustion, by alternate periods of sleep and watching.

An insufficient quantity of sleep exhausts the spirits and produces head-ache, anxiety of mind, and moroseness of temper; moreover, it debilitates the nervous system. On the contrary, too great an indulgence in sleep is also injurious, as the muscular motions are thereby debilitated, the nerves and other fibres become relaxed or torpid, and a state of indolent stupidity supervenes, which is not thrown off the whole day; added to which, that sprightliness of life and vivacity are wanting, which are usually the consequences of early rising. It is evident, therefore, that sleep requires some regulation as well as our diet. A habit of retiring soon to rest, and of rising early, appears to be very favourable to the development of the powers and the preservation of health. Those who lie half of the day in bed become effiminate and enervated, and they soon lose that activity, which, properly directed, can alone confer value on life.

It would appear that six hours sleep every night is sufficient for any adult person during the summer, who is in health, and in winter about seven, or at the most eight. Those who indulge for nine or ten hours in bed, are commonly wakeful or restless during the fore part of the night; and when they ought to rise, sink to rest and slumber on till noon, by which imprudent conduct even the strongest constitution will eventually be injured.

Nothing, however, more certainly destroys the constitution than that of sitting up a great part of the night, and lying in bed the

pleasantest and most healthy part of the day, as is too much the custom with those who lead a fashionable life, thereby converting night into day, and day into night. This plan of proceeding is sure to injure the health of its votaries, and to shorten the natural period of life, and it will undermine the strongest constitution, even if accompanied with habits of regularity in other respects; but how much more destructive must its effects be, when conjoined with intoxication, gambling, sensuality, and other midnight excesses. Persons of athletic bodies may probably bear up for a time under late hours and intemperance, but the delicate and weakly must unavoidably fall very soon martyrs to such indiscretions.

It is, indeed, melancholy to observe among the votaries of fashion and dissipation in the metropolis of Great Britain, the ill effects produced on their constitutions by their midnight revels. Let any person view their pallid countenances where rouge is not resorted to, as well as their ghastly forms, and they will be well satisfied that inverting the established order of things, by turning night into day, soon robs the blooming cheek of its roses and lilies, brings on early decay in process of time, and destroys the most vigorous frame.

A due proportion of sleep, taken at proper hours, is absolutely necessary for the welfare of our bodies, which during this period receive a considerable degree of nourishment and renovation: if, however, it be too short, interrupted, or taken at unseasonable hours, debility ensues, and the vital powers, sustaining a deprivation of adequate supply of nourishment, are exposed to injury. A person from this cause will be likely to feel a great degree of languor and weariness when he rises, instead of proper refreshment. It must be evident to every person that a considerable portion of human happiness is founded on the alternate vicissitudes of motion and rest: those, therefore, who neglect the latter, will rarely be gratified by the relish resulting from the former.

We should avoid sleeping in those apartments where we live during the day, and for a bed-chamber make choice of a spacious room exposed to the sun, and that can have the windows opened in the day-time for the admission of pure air and the dispersion of vapours collected during the night. To secure ourselves from the effects of a vitiated atmosphere, we ought also to take care that the beds are well shaken up every morning; and that these, as well as the bed-clothes, are freely exposed for a due length of time to the air.

Children may always be allowed to take as much sleep as they please, but it is a very different case with adults of a youthful age. Quietude and repose best, however, become the constitutions of those who are far advanced in years, since the springs of life in them are rather weakened than invigorated by excessive action and want of sufficient sleep.

The best way of making sleep refreshing, is to take proper exercise through the day: to avoid strong infusions of tea or coffee in

the evening; to make a very light supper at least an hour or two before retiring to rest, where such a meal is indispensably necessary; to go early to bed; to lie down with a mind as serene and cheerful as possible, placing the body in the position which is most congenial to the feelings and habits of the individual; and to rise betimes in the morning; for it has been observed that the most of those who have attained a great age, have generally been early risers. It must however be understood, that although early rising and activity are conducive to health, they should nevertheless be regulated by the state of bodily strength, the season of the year, and the habitual exertions of the mind.

Too much exercise will prevent sleep as well as too little. We very seldom hear, however, of the active and laborious complaining of restless nights: it is the indolent and slothful who are generally incommoded with these complaints. The labourer enjoys more real luxury in sound sleep and plain food than he who fares sumptuously and resposes on downy pillows, where due exercise is wanting.

Light suppers are also necessary to sound sleep; and many there are who experience uneasy and restless nights, if they commit the least excess at that meal, and when they do fall asleep, the load and oppression on their stomach occasion frightful dreams, the night mare, broken and disturbed rest. Some people cannot sleep, however, unless they have taken solid food at night, and this perhaps merely from habit or custom; but in such cases the very lightest should be chosen, and only a very moderate quantity be eaten, taking care at the same time that an hour or two shall always elapse prior to getting into bed. Indeed, it would always be advisable after eating such a supper to take a little gentle exercise before the person retires to rest.

Those who follow intellectual pursuits with immoderate ardour, and who prolong their vigils to very late hours, exhaust their powers, and speedily are visited by premature old age. Shun, therefore, close meditation and intense study by nights.

Anxiety of mind, and intense thinking, are almost certain to prevent sound sleep; and therefore we should endeavour to preserve tranquillity of mind, and banish anxious thoughts as much as possible, when we retire to rest, calling in the aid of philosophy to bear with due fortitude and resignation those ills which we cannot prevent.

He that goes to bed early at night will in general be desirous of rising betimes in the morning: moreover, he that accustoms himself to an early hour for retiring to rest, can rarely join in Bacchanalian revels, nor in the fashionable dissipations of high life: his sleep is not disturbed by the effects of unseasonable luxury; his slumbers are sound and refreshing; and he rises with cheerfulness and fresh acquired vigour to breathe the morning air and commence the duties of the day.

It has been the subject of frequent discussion, whether sleeping after dinner be wholesome or not. It is true, that most animals, after

satisfying the cravings of appetite, give themselves up to repose ; and that the due digestion of food requires not only a large proportion of vital energy, but also the easy and unrestrained movement of the bowels, to neither of which bodily exercise conduces ; but persons of a full habit, and having a short neck, had best avoid sleeping after a full meal, although it may be advisable to remain in a quiescent state for a due time, and to avoid exercise. If sleeping in the daytime, or quickly after dinner, be at all admissible, it can only be so for persons who are in a weak and debilitated state, or are very far advanced in life.

OF THE EXCRETIONS AND RETENTIONS.

It has already been mentioned that a proper attention to these is necessary to keep the body in a due state of health. Under the head of excretions and retentions are to be included the saliva, bile, evacuation by stool, urine, perspiration, menstruation, lochial discharge, and secretion of milk ; but as the three last are arranged among the complaints of women, I shall here only notice the five former.

OF THE SALIVA.

The saliva or spittle is a fluid secreted by the glands of the mouth for the purpose of assisting digestion, and ought, therefore, never to be thrown away, as is too frequently the case in smoking or chewing tobacco ; a certain consequence of which is, that the concoction of the food is disturbed and the digestion impaired. No fluid of the body appears to be more necessary to health than the saliva, as it not only assists in dissolving the food, and promoting its due assimilation, but by its saponaceous quality, it cleanses and carries off that viscid mucus which clogs the alimentary canal, and would otherwise impede this process. When, therefore, from any cause, there is a deficiency of salivary secretion, digestion becomes much depraved.

OF THE BILE.

The state and quality of the bile also very much affect the health. The bile in a vitiated state, or when not duly secreted, will sometimes become obstructed in the liver and gall bladder. An inordinate use of spirituous liquors, as well as a life of indolence and inactivity, inspissates this fluid, and occasions the formation of biliary concretions in the gall bladder : these obstruct its discharge into the intestines, and are a grand source of indigestion, obstinate costiveness, jaundice, and hypochondriac affections. When the bile, being once secreted, does not pass properly into the intestines, it is absorbed by the lymphatics, and returned into the circulation, and then gives rise to the jaundice. Enlargement and in-

duration of the substance of the liver itself sometimes take place in these cases, and the dropsy, or some other fatal malady, follows.

On the other hand, when the bile is too abundantly secreted and quickly discharged, our food is deprived of the chief instrument employed by nature in producing chyle, or that milk-like liquor, observed some hours after eating, in the lacteal vessels of the mesentery, and from which the blood is afterwards formed; hence, the digestion becomes depraved, the separation of the chyle from the grosser part of the aliment is obstructed, and the expulsion of the excrements retarded. A general distemperature of the system, particularly of the fluids, is thereby produced; and persons liable to these affections, are apt to feel a preternatural degree of coldness, together with extreme debility, and frequent fits of fainting, the countenance at the same time being very pale.

EVACUATION BY STOOL.

The regular state of the bowels is a point which is deserving of a very careful attention. When the feculent matters are retained too long in the intestines, they vitiate the humours, and when they are discharged too soon, the body is not duly nourished. A medium is, therefore, most desirable, and this is to be obtained by regularity in diet and sufficient exercise.

Great constipation of the bowels produces flatulency and painful distention of the belly, colics, and even convulsions in persons in whom there exists a predisposition to hypochondriac and hysterical complaints. Moreover, the effluvia arising from too long a retention of feculent matter in the bowels being absorbed and carried into the circulation, are apt to occasion an acrimony in the fluids, and not unfrequently obstinate cutaneous eruptions, it may be concluded.

Too great a looseness of the bowels, or habitual diarrhæa, is productive of equal danger and inconvenience as considerable constipation. The occasional occurrence of a moderate looseness is frequently, however, only an effort of nature to expel and carry off something morbid from the intestines, and therefore not to be considered in the light of a disease; still, when it occurs too frequently, or too copiously, and is long continued, some obscure disorder in the bowels, or some material defect may be suspected. Under circumstances of this nature the looseness must be stopped, or rather mitigated, by the assistance of medicine; for otherwise the body will be deprived of its due nourishment, the strength and spirits be exhausted, and ultimately it will destroy the patient.

It has generally been admitted that one copious stool a day is sufficient for an adult in health, and that either more or less may be injurious, in a general way. To obtain this regular action of the bowels, the best plan to adopt is to rise betimes in the morning, take gentle exercise in the open air, then breakfast, and very soon afterwards visit the temple of Cloacina, whether the person has a

call or not, soliciting nature by proper efforts, and persevering therein for a due length of time during each visitation. Habits of this kind may be acquired, which will in time become perfectly natural; and in this way I have known many cases of habitual costiveness completely subdued, and a perfect regularity in the action of the bowels established.

An ill consequence attendant on having a frequent recourse to medicines for the purpose of removing costiveness is, that after a time, the bowels will not act without them from a want of the accustomed stimulus. Those who are subject to habitual constipation had better attempt to remove it by diet and exercise than by drugs; carefully avoiding, at the same time, all articles of aliment which are of an astringent nature.—See costiveness.

Persons who are troubled with an habitual looseness should make use of food that is likely to brace and strengthen the bowels, and which is rather of an astringent quality, such as rice boiled in milk, eggs, cheese, sago, arrow root powder, and wheaten bread made of the finest flour. Red port wine, brandy sufficiently diluted, and toast and water, will be the most appropriate liquors to drink.

As obstructed perspiration is not unfrequently a cause of looseness in the bowels, persons who are affected with it should wear flannel next to the body, and carefully avoid all exposures to cold.

OF THE URINE.

With respect to the precise quantity of urine which ought daily to be discharged, no fixed rule can be laid down: it is, however, much less in summer than in winter, and in warm climates than in those of a frigid temperature. When it is too copiously discharged in consequence of a morbid state of the organs connected with this secretion, it gives rise to thirst, emaciation of the flesh, prostration of strength, depression of spirits, &c. and constitutes that species of disease called diabetes. (See this disorder.) On the contrary, when the urine is too long retained, it is not only re-absorbed or taken up again into the mass of fluids, but by stagnating in the bladder, becomes thicker, and the formation of gravel and stone is promoted. Hence it happens that indolent and sedentary persons are much more liable to these diseases than those who lead an active life.

It has been supposed that the quantity of urine secreted and voided in the course of the twenty-four hours by a person in health, is generally about a third part of the fluids that are taken: this being much exceeded, and for a constancy, is presumptive proof of debility, with too great a laxity of the urinary organs and passages, the effect of which is, to expose the person to atrophy, or general wasting away of the flesh and strength. The urine being smaller in quantity than what has been stated as the general average, unless proceeding from a deprivation of liquids, denotes an

extraordinary degree of heat in the system, or it may arise from a dropsical tendency, or from some obstruction in the urinary passages.

By retaining the urine too long, either from great delicacy, or being so circumstanced in some place of public resort as not to be able to get out for the purpose of voiding it, many persons have greatly endangered their lives. The calls of nature in this way, ought therefore never to be postponed, if possible to be avoided; as when the bladder is over-distended, it is very apt to lose its power of action altogether, and to be rendered unable to expel it properly, and occasionally it destroys its retentive powers.

A retention as also a suppression of urine, under all circumstances and in all situations, may be considered as alarming and dangerous diseases, which demand the most prompt and speedy means of relief that can be afforded. (See these diseases under their appropriate heads.) In pregnant women, in or about the time of labour, the urine being retained or suppressed, calls for prompt assistance; otherwise they will be exposed to the risk of a ruptured bladder, or a retro-version of the womb.

OF THE PERSPIRATION.

Perspiration is the fluid that is secreted by the extremities of the cutaneous arteries from the external surface of the body. It is usually distinguished into *sensible* and *insensible*. The last is separated in the form of an invisible vapour; the first so as to be visible in the form of very little drops adhering to the skin. The smell of the perspirable fluid, in an healthy man, is like that of fat; its taste, manifestly salt and ammoniacal. For the most part it is of a yellow colour.

The insensible perspiration is supposed to exceed any of the other discharges from the human body, and is of the utmost importance to health; for when it is obstructed, the whole frame soon becomes disordered. It varies in quantity according to the temperature of the atmosphere, the season of the year, climate, age, sex, and general mode of living. Thus men have a more copious, viscid, and higher coloured perspiration on summer days, and in warm countries, than in colder regions. The perspiration of a man usually exceeds that of a woman, and is also supposed to be of a more acrid smell. The young are more subject to perspire than the aged, who, during the excessive heat of summer, perspire very little. A long abstinence from drink causes a more acrid and coloured perspiration; and the drinking a great quantity of cold fluids in warm weather, a limpid and thin perspiration.

The uses of the insensible perspiration are, to liberate the blood from superfluous animal gas, azot, and water; to eliminate the noxious and heterogeneous excrements; hence the acid, rancid, or putrid perspiration of some men; to moisten the external surface of the body, lest the skin be dried up by the atmospheric air;

and to counterbalance the suppressed transpiration of the lungs; for when it is suppressed, the cutaneous is increased.

The use of the sensible perspiration in an healthy man is scarcely observable, unless from an error of the six non-naturals, as they are usually termed, which comprehend air, meat and drink, sleep and watching, motion and rest, retention and excretion, and the affections of the mind, all of which subjects are herein discussed. The first effect of the sensible perspiration on the body is somewhat prejudicial by its exhausting and drying it, although it is sometimes of advantage by supplying a watery excretion; for when the urine is deficient in quantity, the sweat is frequently more abundant, and also by eliminating at the same time any morbid matter; thus various subtile particles are critically expelled from the human body in acute and chronic diseases with the sweat.

Whatever gives a sudden check to perspiration may be productive of very injurious consequences, and these should be carefully guarded against, as many persons annually fall a sacrifice to not paying proper attention to the various causes from which perspiration may become obstructed; one of the most common of which is, taking, or catching cold as it is more usually called.

By sudden transitions from heat to cold, either from changeableness of the weather, the state of the atmosphere, going immediately from a hot room into the cold air, or throwing off some part of the clothing when heated by exercise, the perspiration is very apt to be obstructed; and colds, coughs, and inflammation of the lungs are the usual effects of such conduct. Drinking freely of cold water, or any other small liquor, when the body is heated, is not only injudicious, but fraught with many ill consequences. Damp houses and damp beds, or linen; exposure to night air, especially in hot countries; not changing clothes quickly after their getting wet; and continuing to wear stockings, shoes, or boots, which are saturated with water, exposing the feet thereby to cold, are all likely to be attended with injurious consequences, by occasioning obstructed perspiration. The same will happen by throwing open a window when the room is hot and sitting in or near it, so as to be exposed to a current of air. In the hot season of the year, some persons are so imprudent as to sleep with a window open, exposing themselves thereby to considerable danger. Whenever this practice is adopted, great care should be taken that the window is at a considerable distance from the bed, and that the air admitted into the chamber does not come in a current upon the person.

Some are so imprudent, or fool hardy, as to bathe themselves in cold water when considerably heated by walking, dancing, or the like exercises; and by such conduct have been soon attacked with some dreadful disease or other. In some instances death has been the consequence.

I beg leave here to notice a very imprudent step taken by some persons when they happen to get wet feet. I allude to the prac-

tice of washing them under such circumstances with some kind of ardent spirits, such as brandy or rum; this is always attended with very great danger, for instead of promoting and keeping up the due circulation in the feet, it will act directly contrary, and greatly increase the check which has been given to it by the exposure to wet, owing to the speedy evaporation of the spirit, of itself producing a considerable degree of coldness. The better and safer way is, to well dry the feet, then rub them for some time with flannels made warm by the fire, covering them afterwards with woollen stockings; and lastly, for the person to take a little brandy or other spirit *inwardly*, keeping for some time in motion. The spirit, by its stimulus on the stomach, will quicken the circulation in every part of the body, and the blood will be propelled by the heart to the extremities with its accustomed energy.

There are persons who are afflicted with a disagreeable and fetid perspiration from their feet, and which in warm weather is apt to be very offensive to themselves as well as all about them. Under these circumstances some have attempted to restrain, if not wholly stop, this unpleasant secretion; but the imprudence in so doing has usually been followed by bad consequences, and its reproduction should be effected by putting the feet frequently into warm water, afterwards applying emollient poultices. The means for obviating the disagreeable smell arising from sweaty feet have already been pointed out.

I will conclude my observations on perspiration by recommending a strict attention to be paid on all occasions, carefully to avoid 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 overheated by exercise or any other cause whatever, to let it cool gradually.

OF THE PASSIONS.

The passions have very properly been divided into two kinds, the exciting or enlivening passions and the depressing ones. They operate on the body either suddenly, or in a slow, progressive, and gradual manner. Death has been known to be the immediate effect of the former, while the latter generally diminish the powers of life. Those of sanguine and choleric constitutions suffer chiefly from the violent passions, and the melancholic and phlegmatic, whose sensations are dull, fall victims to those of an opposite kind.

The passions of an animating nature, as joy, hope, love, &c. when kept within due limits, have been supposed to be conducive to health, by exciting the nervous influence and promoting an equable circulation; while those of the depressing kind, such as grief, despair, and fear, produce the contrary effect, and give rise to very severe diseases. Anxiety of the mind disturbs digestion

infinitely more than any fatigue of body, and nothing so much hurts the nervous system as fear, grief, and anxiety.

All the passions, of whatever species, when carried to excess, induce very formidable diseases, and involve us in imminent danger; and even when not carried to any extraordinary degree of excess, will sometimes do injury to the body, the tongue being immoveably fixed and incapable of utterance, and the breathing much oppressed. The long continuance of one passion, by irritating the brain, is apt to produce bodily disease, and not unfrequently terminates in mental imbecility.

The early management of the mind, by a proper education, is the best guard against the mischievous effects of the passions at an after period. Their controul becomes then a habit with the individual, and prevents any excesses which might otherwise arise from their occasional excitements by unforeseen circumstances. Hence it may be laid down as a leading maxim, that the controul of our passions is an indispensable requisite to the proper enjoyment of health. From the intimate connection between the soul and body, the one can never be affected without the other partaking of the evil; for the body follows the affections of the soul, and acts as it feels. It must, however, be noticed, that different passions produce very different effects, or the same passion may excite very different sensations in the same or different individuals. The principal effects of the passions remain to be considered separately, and I shall begin with Joy.

OF JOY.

Under this state of the mind an extraordinary degree of pleasure is felt, and a high degree of animation takes place. The heart is expanded, the circulation rendered free and vigorous, the eyes sparkle, and the mind is composed and mild. Hence this state is favourable to the enjoyment and recovery of health, where the body is wasting under general debility or nervous depression. A variety of modifications or degrees of this passion occur under the names of gaiety, mirth, cheerfulness, &c.

Excessive joy, however, is sometimes attended with a very bad effect, and there are instances to be found where a sudden transport of joy has terminated fatally. It will, therefore, be best to prepare the mind gradually to meet the emotions of this passion, by which the effects will be lessened and duly regulated. Joy, though least suspected, is sometimes more inimical to life than its opposite, grief; and, when sudden, is calculated to produce alarming consequences.

The condition of mind produced by joy may be much favoured by a proper attention to the state of the evacuations, and likewise to the regulation of diet. The evacuation by the skin is of great importance, and the diet should be easy of digestion and of an aperient quality. Moderate warmth may be considered as having

some influence in producing that state of mind which is favourable to this passion; and by the circulation being promoted by this benign disposition, any tendency to obstruction may possibly be prevented.

Laughter may be considered as a mode of expressing this passion, and when kept within due bounds, is very useful; but instances have been recorded of persons expiring through excessive laughter. Moderate laughter promotes the circulation of the blood through the lungs, and increases the energy of the nervous system; hence it has proved the means of relieving pains in the stomach, colic, and several diseases connected with obstruction, or nervous debility.

OF HOPE.

Indulgent Heaven
Sent down this kind delusion, through the paths
Of rugged life to lead us patient on;
And make our happiest state no tedious thing.

The power of hope over the human mind is indeed very great and mighty. It is the universal comforter; it is the spring of all human activity. Animated by the prospect of some distant good, many men will toil and suffer through the whole course of life; and it is not so much what they are at present, as what they hope to be in some after time, that enlivens their motions, fixes attention, and stimulates to industry.

Hope may be considered as a modification of joy. It is the most pleasing state the mind can be in, and is peculiarly favourable to health. In the language of the poet, it tells always a flattering tale, and paints the image, not as it really is, but as it ought to be. Its beneficial effects on the body have been evinced in numberless instances, where it has produced a calmness of thought, and tended to prolong existence even in the most forlorn situations. It may be said to be that passion, or affection of the mind, which is the latest to leave us, and which continues to linger with us till the extinction of life, and to point out, even before this event is completed, the scene that is expected beyond it.

With thee, sweet Hope! resides the heavenly light
That pours remotest rapture on the sight,
Thine is the charm of life's bewildered way
That calls each slumb'ring passion into play.—*Campbell.*

OF LOVE.

This passion is, perhaps, of all others the strongest and most impetuous, because it is the most impatient, and least susceptible of the control of either the will or understanding. It generally affects the mind by degrees, but is at the same time, when once fixed, more steady than any other; and hence the caution that should be ob-

served in not giving way to it at an early period, when it is still under the restraint of the will.

In cautioning, however, against being led away by an ungovernable degree of this passion, it cannot at the same time be denied, that a moderate degree of indulgence in it is often followed by very happy effects. An attachment to a beloved object has been known to remove obstinate disorders, and it has produced a total change on the powers and disposition of the mind, by giving it an ardour and heroism to vanquish every obstacle that has presented itself to its desires. It is chiefly when this passion is obliged to be concealed, and where there is but little hope of enjoyment, as in many cases of the female sex, that it proves so injurious to health, and preys with a secret uneasiness on the mind. In women, a disappointment in love is commonly succeeded by an obstinate suppression of the menses, along with which, in such cases, there is frequently united a mixture of sorrow and timidity. Sometimes it terminates in melancholy madness, or hurries on its victim to self-destruction. Hence the poet observes,

> Love well repaid, and not too weakly sunk
> In wanton and unmanly tenderness,
> Adds bloom to health, o'er every virtue sheds
> A gay, humane, a sweet, and generous grace,
> And brightens all the ornaments of man.
> But fruitless, hopeless, disappointed, rack'd
> With jealousy, fatigued with hope, and fear,
> The serious, or too languishingly fond,
> Unnerves the body and unmans the soul.
> And some have died for love: and some run mad;
> And some with desperate hands themselves have slain.

The most gratifying cure for love is the possession of the object of it, but absence and fresh pursuits often do much in wearing off the distressing impressions made on the mind by it.

OF GRIEF.

Grief has a powerful influence on the body, and its effects are commonly more destructive than most of the passions. Anger and fear, being of a more violent nature, seldom last long; but grief often degenerates into fixed melancholy; and we must from daily observation be convinced that this passion, which is slow and silent, will undermine the strongest constitution.

The symptoms by which it is manifested are, general languor of the circulation and muscular contraction of the heart, a slow, weak, unequal pulse, paleness, and sallowness of the countenance, fretfulness of temper, loss of sleep, failure of appetite, flatulence, and indigestion. In men, it is frequently accompanied by spasmodic affections, colic, and the piles; and in women, with suppressed menstruation, the whites, and hysterics. The bile is not properly secreted, or it becomes stagnant in the liver or gall bladder, and either there forms biliary concretions, or by being absorbed, is

again returned into the general mass of humours, and so gives rise to jaundice, dropsy, or some disease of the bowels. Sometimes costiveness prevails, and at others, a diarrhæa or purging.

All the functions of the body become impaired by an indulgence in grief, and those persons who give way to it, and suffer themselves to be overwhelmed by dejection of mind, can never possess health. Those, therefore, who would wish to enjoy that portion of life which has been allotted them by Providence, should endeavour to be as cheerful as they can, and bear with due fortitude and resignation the evils which befal them.

Grief may be subdued at the beginning, but when it has acquired strength by indulgence, the mind is apt to be overwhelmed at last with fixed melancholy, and then to sink under its oppression or despondency, driving its unfortunate victim in many cases to commit an act of suicide.

Those who labour under grief should keep their attention engaged as much as possible, by a frequent change of scene, and mingling in the active employments and innocent amusements of life. Indolence and solitude are the supporters and nourishers of this passion: occupation of the mind, cheerful society, and a varied scene, are its antidotes.

Weeping often terminates a paroxysm of grief, and may, therefore, be considered as a useful palliative remedy.

Many persons who labour under grief or depression of spirits are very apt to betake themselves to drinking; but the momentary relief thereby obtained is much too dearly bought by the far greater languor which succeeds after the exhilarating effects of the liquor have ceased, and the necessity of increasing the quantity of these liquors after a time to obtain these effects, never fails in the end to undermine the constitution, and ruin the health, and this in a most miserable manner. Persons labouring under woe will do better by laying their heads on their pillows, and thereby court tranquillity of mind, than by applying their mouths to the bottle.

A moderate use of wine may, however, be proper; but spirituous liquors should be avoided, and particularly in the form of drams. When these are resorted to, a habit imperceptibly steals on before the person is aware of the consequences to which it leads. By it, the nervous system becomes blunted and depraved to every feeling, the energies of the mind suffer, loss of memory, character, and constitution take place, obstructions arise in the principal organs, the digestive powers are weakened, if not destroyed, and jaundice, diseased liver, and dropsy put a period to a wretched existence.

Others have recourse to opium, in some form or other, and addict themselves not only to a very frequent but immoderate use of it; but except on very urgent occasions this remedy ought to be shunned; for although it may afford some relief for the present, yet it will not fail, by a frequent repetition, to add very considerably to

the languor and depression of spirits, and also to impede the action of the stomach and bowels.

OF FEAR.

The passion of fear produces effects somewhat similar to grief, for it weakens the powers of the body and mind; and every disease to which human nature is liable, never fails of being considerably aggravated by it. Fear and anxiety ever tend to depress the animal spirits, and not uncommonly render those disorders fatal, which might be overcome by a mind impressed with due fortitude and resignation. If a person be at any time strongly prepossessed with the opinion that a fatal termination will be the consequence of the disease with which he is afflicted, this will often operate so powerfully on the mind, that no reasoning or argument can counteract it, and he falls a victim to the force of imagination.

This is often the case with women in child-bed, as several of those who die in that situation are impressed with a notion of their death a long time before it happens, and there are good grounds for supposing that this impression is often the cause of it. The same happens in other complaints; for there have been persons who have entertained the notion of their dying at some specific period, or of some particular disease, and there is great reason to conclude that such events have actually taken place from the mind being unfortunately prepossessed for a considerable time that such an event would happen.

The continual apprehension of evil is frequently converted into that misfortune we have been accustomed most to dread; and from this cause some probably fall victims to the very disease they had a peculiar dread of through life, or which had been strongly impressed upon the mind either by accident, or some absurd prediction which had been made to that purport.

The misfortunes which take place from a concurrence of unhappy incidents, whether respecting diseases or otherwise, should be as little permitted as possible to disturb and render us dejected and miserable before they happen; because if the breast be once laid open to the dread of *mere possibilities* of miseries, life must become a prey to dismal solicitude.

> Is there an evil worse than fear itself?
> And what avails it that indulgent Heaven
> From mortal eyes has wrapt the woes to come,
> If we, ingenious to torment ourselves,
> Grow pale at hideous fictions of our own?
>
> Serene, and master of yourself, prepare
> For what may come; and leave the rest to Heaven.—*Armstrong.*

A morbid indulgence in an excess of fear not only imbitters man's existence, but may often tend to shorten its duration. He hastens the advance of death by the fear with which his frame is seized at its real or imaginary approach. His trembling hand in-

voluntarily shakes the glass in which his hours are numbered; and, contradictory as it may appear, there are well attested instances of persons who have been driven to suicide by the mere dread of dissolution. It would seem as if they had rushed into the arms of death to shelter themselves from the terrors of its countenance.

The sudden effects produced on the system by terror or fright are sometimes so great that the person who is the subject of them, is unable to save himself by flight; he becomes, as it were, petrified and fixed to the spot, his heart palpitates, his hairs seem to stand on end, and his whole frame is seized with tremblings and debility. Fear or fright sometimes, however, imparts unusual vigour and strength; for persons who have been confined to their beds under a severe fit of the gout, and thereby rendered incapable of moving hand or foot, and seemingly of every exertion whatever, have been known to rise therefrom on an alarm of fire, and to make their escape with great promptness. Terror or fright sometimes occasions convulsive affections that have returned periodically throughout the remainder of the person's life; and cases have occurred where severe faintings, and even death itself, have ensued. In women, a suppression of menstruation is a frequent consequence of a fright.

By terror the force of the pulse is often much diminished, there is great debility, and sometimes the insensible perspiration being suddenly checked, shiverings and anxiety are produced. In others it excites increased perspiration, and the bowels and urinary bladder are occasionally so much disordered, that an involuntary discharge of their contents takes place.

Children are greatly inclined to frighten each other, and nurses and servants are apt to alarm their tender minds with tales of spectres, hobgoblins, and haunted houses; which imprudences impress them with great timidity throughout the remainder of life, and not unfrequently the mind is thrown into such disorder as never again to act with regularity. It therefore behoves parents, and those intrusted with the care of children, most strictly to reprehend and forbid such conduct.

The treatment under violent degrees of fear should be the same as that which is suited to spasmodic maladies, by first removing the spasm produced, and then promoting the different evacuations that may have been interrupted.

OF ANGER.

Anger is that violent passion of the mind, united with a propensity to be revenged on the author of some real, or supposed injury committed on the offended party. It so far discomposes and ruffles the mind, as to produce a violent spasmodic stricture of the nervous and muscular parts of the body; the countenance becomes flushed, the eyes sparkle, and the pulsations of the heart are carried on with increased rapidity. Sometimes, however, when

this passion is carried to a great height, it produces copious hemorrhages from the head or lungs, or the face turns pale, the voice falters, or altogether fails by an incapability of utterance, universal tremor takes place, and under such circumstances, the person falls down in a state of perfect insensibility from apoplexy, in consequence of too great a determination of blood to the head, and, if not timely relieved, soon expires.

This effect of anger is thus beautifully described by Armstrong:

> Who pines in love, or wastes with silent cares,
> Envy, or ignominy, or tender grief,
> Slowly descends, and ling'ring, to the shades;
> But he who anger stings, drops, if he dies,
> At once, and rushes apoplectic down;
> Or a fierce fever hurries him to hell.

Anger has been termed a short-lived madness, and according to its degree, induces different spasmodic and convulsive symptoms. Irritability of disposition greatly predisposes to this passion, particularly in those of a hypochondriac or hysterical temperament, and in those of a dry and rigid constitution.

The stomach and bowels are found to suffer very much, in many instances, by a violent fit of anger. In some, a vomiting is excited; in others, the bile passes quickly into the intestines, and occasions a purging.

Those who value health should cautiously guard against gusts of anger, neither ought they to indulge in resentment; they should endeavour to keep their minds at all times as calm and serene as possible, for serenity of mind greatly tends to promote health, whilst, on the contrary, anger and resentment prey upon it, and gradually undermine and waste the constitution.

Where reason proves too weak for the controul of this and other unruly affections of the mind, it has been suggested by Dr. Armstrong, in his Essay on Health, to oppose passion to passion, and extinguish one by its opposite; and he has recognized a power in nature which he thinks may be rendered the universal tranquillizer of the human breast; and this power is music.

For persons addicted to anger, a mild diluent is the most proper: all stimulating food and intoxicating liquors ought carefully to be shunned.

MAXIMS

TO BE OBSERVED

FOR THE PRESERVATION OF HEALTH,

AND

Deduced from the Preceding Rules.

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1. Rise at an early and regular hour in the morning, in the summer and autumnal months. Very soon afterwards make use of cold bathing, giving a preference to sea water, if readily to be obtained. During the other seasons of the year, substitute minor ablutions in your chamber, paying at all times a strict attention to cleanliness in every other respect.

2. After these, enjoy the refreshing air of the morning by a gentle walk, or ride on horseback for an hour, and then partake of a moderate breakfast of either, tea, coffee, cocao, or milk, as shall have been found to sit easiest on the stomach ; but avoid salted and dried meats, as animal food once a day (that is, at dinner) is amply sufficient to support the powers of life with due vigour.

3. Throughout the course of the day pay due attention to business, or your professional duties; but suffer not the desire of gain, or pecuniary considerations to engross too much of your time. Devote some part of the forenoon to reading, agriculture, gardening, field sports, and such other pursuits, which will exercise and invigorate the body at the same time that they keep the mind employed,

4. When heated by exercise or any other means, neither throw off any part of your clothing, or expose the body to a current of air, or cool wind, nor drink any cold liquor, but suffer the heat to subside gradually under a mild temperature. Should your stockings, shoes, boots, or any other articles of your dress have been wetted by an exposure to rain, or other inclemencies of the weather, take them off quickly, rub the parts very dry for some time which have been exposed to the influence of the wet clothing, then put on dry oness omewhat warmed, keep in motion, and, if necessary, take a little brandy or other spirit, but never apply it outwardly, as this practice is attended with considerable danger, by adding to the degree of coldness in the parts, in consequence of

the quick evaporation of the spirit, and thereby checking perspiration.

5. Do not fast too long at any time. If the hour at which you dine is a late one, partake of a basin of soup, or some other light aliment, between breakfast and dinner. At this last meal, eat moderately of plain food, consisting of a due proportion of such animal and vegetable substances as from observation and experience you have found best suited to your stomach and its digestive powers. Take care to masticate your food very well, and to rise from table with somewhat of an appetite, or ability to eat nearly as much more as you have already done.

6. Drink somewhat sparingly of diluting liquors at dinner, whether your beverage be water or beer. Seldom, if ever, exceed half a pint of wine at or after this meal, and abstain wholly from spirituous liquors, unless wine is apt to become acid on the stomach, in which case, a small quantity of brandy, sufficiently diluted with water, may be substituted.

7. Make use of no active or severe exercise soon after dining: nor, on the other hand, indulge any propensity to sleep, if you are of a full habit and have a short neck, as apoplexy may ensue.

8. In the evenings enjoy, in a rational manner, the society of your friends, by instructive conversation, music, cards, or any other innocent and pleasing amusement ; but shun rooms, the temperature of which is heated to a high degree by a large assemblage of persons, and innumerable candles, or other lights, besides fires.

9. If supper be really necessary (which cannot be the case with those who dine late, and who generally substitute tea or coffee in the evening) it should consist only of some very light article, which is easy of digestion ; and it ought to be taken an hour or two before going to bed, which should not be later than ten or eleven. Do not suffer your bowels to be confined.

10. Be temperate in all things: keep every passion within due bounds; avoid every thing that tends to inflame the imagination or excite sensuality ; abuse not the pleasures of love, shun studies and deep meditations protracted to a late hour ; together with every species of fashionable dissipation ; and when you retire to your chamber at the close of the evening, fail not to return due thanks to Almighty God for the blessings which he has conferred on you, and to supplicate him to protect you from the dangers of the night, and grant you health and happiness throughout life. Then lay your head, properly elevated, on your pillow, with a mind as free from perturbation, and undisturbed as possible by anxious thoughts, or distressing cares. Such are, indeed, the best means to make sleep refreshing.

Rules for preserving the Health of Europeans who go into a Tropical Climate.

Men who exchange their native for a distant and warm climate, may be considered in a light somewhat analogous to that of plants removed into a foreign soil, where great care and attention are required to inure them to their new situation, and keep them healthy; and the preservation of the health of Europeans who go into a tropical climate will very much depend on their avoiding the various predisposing and exciting causes of disease, until the physical sensibility to impression is reduced by habit. All such should, therefore, most carefully attend to the following regulations.

Europeans must cautiously avoid arriving in a tropical climate during what is termed the rainy season of the year: this with some little variation, according to the place of destination, commences in August, and terminates at the end of October, or beginning of November.

Their place of abode should be somewhat elevated, dry, open to the air and sun, and as remote as possible from marshy grounds, stagnant waters, or woods. The former when acted upon by a powerful sun, never fail to send forth noxious exhalations and vapours, which give rise to intermittent and remittent fevers, fluxes, &c.; and the latter, by obstructing the free current of air, are sure to render such places damp and unwholesome. Those who have it not in their power to select their place of residence, and are unavoidably obliged to inhabit a house which is situated low, will act prudently in sleeping in one of its highest apartments.

To all new comers, I would likewise recommend their being careful to expose themselves at first, as little as possible to the intense heat of the sun at mid-day, and their most cautiously avoiding the dews and damp air of the night; a neglect of attending to which is the chief source of the great fatality which befalls Europeans soon after their arrival in a tropical climate.

They should wear calico next to the skin in preference to linen, go early to bed, and rise betimes in the morning, making use very soon afterwards of a cold bath, which is one of the most powerful means we possess of counteracting the injurious influence of a warm climate, connecting the most grateful sensations with effects of a highly salutary nature.

After cold bathing, they should take gentle exercise, the morning being preferable for this to any other part of the day, carefully avoiding any exposure of the body afterwards to a current of air, or the drinking any kind of cold liquor when much heated. If they are at any time overtaken by rain, so as to have their clothes wetted, they should change them as quickly as possible. They must be sure also to pay a strict attention to cleanliness, not only by changing their linen once or twice every day, but by conjoining

this process with minor ablutions of different parts of the body with cold water, a custom universally adopted among the natives.

Europeans newly arrived in a tropical climate should likewise place a proper check on their appetite, partaking only moderately of the delicacies of the table, and make a very temperate use of vinous liquors. They had better abstain wholly from spirituous ones: if any are used for the purpose of allaying thirst, rich lemonade with a very small proportion of old rum or brandy added to it, forming weak punch, may be found a grateful and refreshing beverage at or about dinner time; but before this hour, a solution of preserved tamarinds in water, simple lemonade, or the liquor known by the name of imperial, will be more appropriate drinks.

Such persons should also refrain from dancing, field sports, and all other amusements and exercises of a heating nature: they should possess a proper self-command in sensual gratifications, and cautiously guard against a costive state of the bowels, by regularly repairing to the temple of Cloacina once or twice a day at a certain or stated hour, and then soliciting natural evacuations. If at any time this plan should not be attended with due effect, one or two motions ought to be procured by the aid of a lavement or some cooling laxative, such as a solution of the sulphate of magnesia, tartrate of potash, &c. See Class of Laxatives, Prescription 6, 11, or 13.

By a proper observance of these rules, in addition to the general ones already pointed out, I am fully satisfied by personal experience, during a residence and practice of nine years in the West Indies, that Europeans may enjoy a fair share of uninterrupted health in a warm climate; and that if they do not, much may be imputed to their own mismanagement and imprudent conduct.

Soldiers and sailors are persons who are very apt to suffer in a tropical climate from the effects of intemperance, conjoined with an exposure to intense heat during the day, and moist air at night; and it therefore greatly behoves those who are placed in command over them, to be as attentive as possible in preventing such occurrences. The health of seamen in particular will depend upon their avoiding undue exposure to the sun, rain, night air, intemperance, unwholesome duties on shore, such as wooding, watering, transporting stores; and in fine, to all such occupations as subject them to excessive heat or noxious exhalations, as these never fail to be highly dangerous to Europeans whose constitutions are unassimilated to the climate. Such works had best be done by employing negroes, or natives of the country.

When under the necessity of pitching tents for the accommodation of soldiers or sailors on shore duties, the driest and highest spots should be chosen, and under cover of these, hammocks should be suspended for the use of the men by night, as they ought not to be suffered to sleep on the ground.

I have now only to add an observation or two in behalf of Europeans who visit those parts where the yellow fever is apt to prevail.

In the constitution of persons who come from a cold country there seems to exist a peculiarity which renders them more liable in a warm climate to many diseases, and particularly to fever, than the natives and those who have been assimilated to it by a residence of some standing. Accordingly, we find that the same exposure will produce fever or other disease in a stranger, while the native and old inhabitant will not be at all affected by it; or even supposing that both are attacked, the symptoms will be ten-fold more urgent and severe in the former than in the latter.

It has been ascertained that the heat of the body of Europeans on their arrival in the West Indies, where the yellow fever was so very prevalent some years ago, and where, indeed, it still makes its appearance occasionally, is generally between three and four degrees above that of the temperature of the natives; and to this disposition to take on an inflammatory action has been ascribed, why Europeans are so liable to be attacked with this species of fever soon after their arrival.

The robust and plethoric will, therefore, act prudently on their approach to a warm latitude, to lose some blood, proportioning the quantity drawn off to the strength and age of the person; but should this step have been neglected during the latter part of the voyage, it ought to be done immediately on landing.

After bleeding, it will be advisable, if the person is of a bilious habit, to cleanse the stomach by a gentle emetic, and on the succeeding day, to evacuate the contents of the intestines by some proper purgative. See this Class, P. 1, 3, or 4. If he is not apt to be incommoded by an over-secretion or obstruction of bile, the emetic will not be necessary.

Such measures having been adopted by the new comer, it will then be advisable for him to begin a slight course of mercury, taking from two to four grains of calomel, according to his age and other circumstances, in the form of a pill, every second or third night, until the gums are rendered somewhat tender, and then the medicine may be omitted for a day or two, and the purgative be repeated. The safety of the person has been thought to depend much on the system being properly impregnated with the mercury, and therefore its use ought to be persevered in until this object is effected.

After the completion of such a course of medicine, the new comer must observe a strict temperance in his diet, living chiefly on vegetables and ripe fruits for the first two or three months, partaking very moderately of wine and other such liquors, and observing the greatest precaution at the same time in avoiding as much as possible, any exposure to the intense rays of the sun during the day, and the cool or damp air of the night, until his constitution has become assimilated to the climate.

It is the reduction of tone, which a certain period of residence in a warm climate occasions in the constitution of Europeans, that in a great measure tends to secure them from an attack of the

yellow fever, and it is a corresponding state which affords immunity to the native inhabitant.

Rules to be observed by Persons who come from a warm Climate to a Cold one.

The principal precaution to be observed by those who leave a warm climate, and either visit or become settled inhabitants of a cold one, is to take due care to regulate the time of their departure from the former so as to arrive in the latter before the approach of winter, and to make such a suitable change in every part of their dress as shall effectually guard their bodies against the difference and vicissitudes of the atmosphere which they will have to encounter. On this account, waistcoats and drawers of flannel should be worn by persons of both sexes next to the body on the approach of cold weather, and the outer garments should consist of articles of a close and warm texture.

Means for Preventing the further Extension of Infectious Diseases, and for Destroying the Powers of Contagion.

It may very justly be imputed to a want of knowledge or care in the relatives and attendants, where infectious diseases, such as typhus, scarlet fever, ulcerated sore throat, and others of a like nature, are permitted to spread through a family, in consequence of one thereof becoming the subject of them; because, by an early adoption of proper means, the deleterious effects of contagion may not only be arrested, but completely destroyed. This very desirable object is to be attained by paying attention to the following rules.

As soon as any disease of an infectious nature, such as typhus, ulcerated sore throat, scarlet fever, &c. becomes apparent in a family, the person so affected should be removed, without delay, from the rest of it into a clean and well-aired room in the most remote part of the house, and as much separated from the other members of the family as possible, and particularly the younger branches. If possible, he should be lodged in the upper story, as the current of heated air is naturally upwards, and the atmosphere loaded with the contagious effluvia arising from the body of the patient, will (if he be in a lower apartment) diffuse themselves over the whole house; whereas, if he is accommodated above, they will have a ready and immediate outlet. In all large establishments, where a number of young people are congregated together, such as boarding-schools, one or more apartments, and if wholly detached from the house the better, should be kept for the reception of invalids. Where the establishment is of too small a nature to admit

of this, a proper lodging should be reserved in the immediate neighbourhood, to be always in readiness whenever the occasion might require to resort to it.

The suspected or diseased person being thus separated from the rest of the family, a strict quarantine is to be observed, and no one be allowed to visit him but those who are impelled by the calls of duty, affection, or necessary business; and they should avoid sitting down on the patient's bed, and likewise receiving his breath immediately in their faces, or inhaling the vapour arising from his body when the coverings of the bed are turned down for the purpose of rendering the sick any assistance. When very near to him, they may keep a bit of sponge moistened in vinegar or camphorated spirits to the nose and mouth, and retain their breath for a time. If under the unavoidable necessity of inhaling the tainted atmosphere, they should, as soon afterwards as possible, blow from the nose, spit, or wash the mouth, with the view of detaching any infectious particles that may have adhered to these passages.

Under the head of fear, it has been mentioned that this passion very greatly predisposes persons labouring under it to be affected by disease, and this is more particularly the case with those of an infectious and malignant nature. The attendants of the sick should therefore command proper firmness of mind, and not give way to fear and apprehension. To assist in strengthening their bodies, so as to enable them the more certainly to resist the powers of contagion, they should take wine in moderation, conjoined with a dose of the Peruvian bark, morning and night. Suffering the fumes arising from vinegar thrown upon a heated fire-pan to be diffused throughout the chamber morning and night, and sprinkling vinegar over the floor now and then throughout the course of the day, may prove also serviceable. These means will prove refreshing to the patient as well as his attendants; whereas the smoke of tobacco might have a contrary effect, although considered by some as useful.

In the apartment of the sick, a due attention must be paid to the temperature of the air. Great heat might increase the tendency to putrefaction, which indeed exists naturally in a greater or smaller degree in most contagious diseases. In the summer, the patient should be covered only with a sheet and very light quilt; and in the winter, with a single blanket and coverlet above the sheet. In thus managing, we are at the same time to avoid extreme cold, as this would not only prove ungrateful to the feelings of the sick, but, by its debilitating power, increase the virulence of the disorder.

Throughout the whole course of the disease, a free and constant circulation of air must, however, be kept up in the chamber of the sick; and for this purpose a part of the window should be left open, both at top and bottom, and the opposite window, if there be one, or else the door of the room, not be wholly closed. For the better success of ventilation, the bed curtains should never be drawn close round the patient, but merely one of them let down

so as to screen him from the irritation of the light, or any current of air. When open windows cannot be had recourse to, on account of high winds, or other inclemency of the weather, a small fire may be kindled in the grate, to cause a current and frequent renewal of the air in the chamber, without much raising the temperature.

Another very essential rule to be attended to is, the frequently changing the patient's bed linen as well as that of his body; and immediately afterwards, carrying them away and putting them into a tub covered over with water, into which a handful of lime or potash has been thrown, for the purpose of detaching the animal matters with which they may be impregnated. All the discharges of the patient should likewise be removed from the chamber as soon as they are voided, and be emptied at a considerable distance, washing the vessel afterwards with boiling water.

In short, an unremitting attention to ventilation, a strict observance of cleanliness in every respect, and a separation of the sick, or even those who are suspected, aided by fumigations, conducted in any of the following ways, constitute the whole secret of not only evading the spread of any infectious disease, but likewise the annihilation of the powers of contagion.

Fumigating with nitric acid gas is thus effected: put half an ounce of sulphuric acid into a glass, china cup, or saucer, and add to it from time to time some powdered nitre. If the air is very foul, and peculiarly offensive, a gentle heat may be applied under the vessel by means of a lamp or heated sand. On board of ships, the apparatus may be suspended to the beams by waxed silken cords, but in prisons, hospitals, and private houses, it may be placed on the floor at the door of each ward or apartment.

When a preference is given to fumigation with muriatic acid gas, this is to be done in the following manner: put one pound of common salt into an earthen vessel of any kind, such as a saucer, and pour over it from time to time a small quantity of sulphuric acid, till the whole is saturated and well moistened. In general, the simple addition of the acid to the salt will be found sufficient to throw up and diffuse the gas throughout the apartment, unless it is very large, in which case, as also in hospitals and prisons, it may be more advisable to apply a moderate heat under the vessel containing the acid and salt.

It seems of little consequence, which of these two fumigations we employ for the purpose of purifying infected air and destroying contagion, as the powers of both are certain and extensive. The muriatic has, however, been considered as more diffusive than the nitric; but although it is by no means unfit for respiration, still it has been thought by some to produce a slight degree of irritation in the lungs. I have, however, employed it in innumerable instances without any injurious effects whatever being experienced.

Another very effectual fumigation is the following, but it requires some nicety in conducting it. Take of manganese in powder,

two parts, the same of common salt, of sulphuric acid, three parts, and of water, one part. Put one ounce of the mixed manganese and salt into a basin, add a large tea-spoonful of water, then drop in half a tea-spoonful of sulphuric acid, and repeat this process until a tea-spoonful and a half of the acid has been used. In this manner a sensible extrication of the fumes is to be kept up.

Any of these fumigations may also be employed for purifying empty prisons, hospital wards, and ships. Clothes, furniture, &c. may be purified by the gas arising from simple sulphuric acid poured into any earthen vessel or glass, under which a moderate degree of heat is applied, keeping the room at the same time pretty closely shut up, as the fumes would be injurious to respiration. As infection is liable to be communicated by clothes which have been worn by the sick, such clothes ought not to be used until they have been first fumigated very well, and then washed.

After the recovery or decease of a person who has laboured under any infectious disease, the roof or walls of the apartment in which he lay ought to be whitewashed, the windows be kept open during the day, and one or other of the fumigations already mentioned be employed throughout the remainder of it. The latter part of the process ought to be continued for some days.

The establishment of houses of recovery and fever wards in different parts of the United Kingdom, for the reception of persons attacked with infectious fevers, are institutions much to the honour of those who founded them; and they are better adapted to check the ravages and prevent the recurrence of these maladies in cities and large towns than perhaps any other plan which has been hitherto devised.

To prevent the extension of the pestilential virus which emanates from the bodies of persons labouring under the plague, the following regulations must strictly be attended to.

The infected and suspected persons must be confined in lazarettos or tents, surrounded by guards, and no kind of communication be held with them, except by such attendants as are indispensably necessary.

The nurses or others employed in waiting on the sick, must avoid coming into actual contact with them, if possible, or placing themselves in such situations as that a stream of air may carry the effluvia towards them; for it is a well known fact, that the pestilential poison, very unlike other ordinary epidemics, is pretty much confined to the vicinity of the affected body, and becomes so diluted at the distance of a very few paces, as to be rendered innocuous. Those who are in immediate attendance on the sick should also pay the strictest attention to personal cleanliness, not only in changing their linen and other clothes frequ ntly, but by washing their hands and other parts of the body with warm vinegar and water.

The atmosphere surrounding the infected should be kept as pure as possible, so that neither the patients nor their attendants may

suffer from the exhalations; and with this view, great attention must be paid to a free ventilation, fumigations with the gas arising from the nitric or muriatic acid in the manner before pointed out, as also to cleanliness in every respect. All substances, therefore, capable of being impregnated with the effluvia, or vitiating the atmosphere, ought to be removed from the apartments of the sick to situations where the healthy cannot suffer from them, and where they may undergo a proper purification by fumigating them, and afterwards well ventilating them. The linen and other clothes of the patient had better be burned. The dead should immediately be buried, or their bodies reduced to ashes by fire, which would, indeed, be preferable. A long stay in pestilential apartments that are but badly ventilated, should be carefully avoided; as also the exhalations arising from patients in the last stage of the disease, and from dead bodies.

To prevent the effects of the contagion of the plague, it will be necessary to keep the mind cheerful and as free from fear, anxiety, and depression of spirits as possible, and to avoid whatever weakens the body; such as intemperance, sensuality, much fatigue, or considerable evacuations, taking care that the diet is of a generous nature, but still under the guidance of temperance not only in this particular, but in every other thing.

Probably some advantages might be derived by using cold bathing, conjoined with a generous diet, the Peruvian bark and wine; as these, by strengthening the bodies of men, will enable them the better to resist the power of contagion. Where water is very scarce, or access to the sea cannot be had for the purpose of bathing, it has been suggested to substitute every morning a shirt dipped in a saturated solution of salt in cold water, and this after being well rung out, to be put on wet, the person keeping the body in motion for some time afterwards by moderate exercise.

For the prevention of the plague, it has been strongly recommended to make use of potent frictions of the whole body with olive oil, living at the same time upon food of a light and easily digestible nature. This practice seems to have been derived from its having been observed that among upwards of a million of inhabitants carried off by the plague in Upper and Lower Egypt during a space of a few years, not a single oilman, or any of the coolies or porters who worked in the oil stores, had been at all affected by the disease; their bodies being always well smeared with oil, as well as their clothes being saturated with it.

For the prevention of the plague in those who cannot keep themselves shut up from the power of its contagion, it has been recommended to open a perpetual blister or large drain, as it has been observed that persons who have had such drains, were generally exempted from any attack of the disease.

Inoculation for the plague has been tried, but in the few instances in which it has been employed it has by no means answered; for it neither renders the disease milder, nor does it destroy the

future susceptibility to it, as the same person may be afflicted with it repeatedly, and even be attacked by it twice in the same season.

It has been ascertained by various experiments, that the most efficacious means of disinfecting letters coming from places supposed to be, or that are actually visited by the plague, is to expose them to the fumes of burning sulphur mixed with nitre.

Questions necessary to be put to Patients, or their Friends about them, previous to prescribing any Medicine or other Remedy.

As the success of practical medicine will depend in a great measure on our being properly acquainted with the constitution and habits of the patient in a state of health, as well as the seat and nature of the complaint, I have, by way of introduction to the history and cure of diseases, inserted the following questions, with remarks thereon, that the practitioner may acquire the requisite information, and be enabled to adopt the most judicious plan of treatment.

Q. How long has the patient been indisposed? In what manner was he attacked? To what cause does he attribute his illness?

In all diseases it will be important to ascertain the age and duration of the complaint which exists, and whether it is of a recent nature, or of some continuance; also with what symptoms it was ushered in, and likewise the causes which are supposed to have given rise to it.

Q. Is his constitution naturally good, or has it been impaired by any irregularity? What is his age? Does he find his disorder any way amended or increased?

In inflammation of the lungs, pleurisy, inflammatory fever, and other acute diseases, the propriety of blood-letting, its extent and repetition, as well as the employment of purgatives and diaphoretic medicines, must in a great measure depend on the constitution, habits, and age of the patient. Their use must also be regulated by the increase or decrease of the symptoms.

Q. In what part of the body does he suffer the greatest pain or uneasiness? Is this stationary, or does it shift from one place to another?

These points are necessary to be ascertained, that topical remedies, such as leeches, cupping, blisters, stimulating liniments, or fomentations, may be employed as auxiliaries to whatever general means are used, or medicines administered internally.

Q. Is his skin hot, dry, and parched, or is it moist and of a proper temperature? Has he much thirst? Is his tongue dry, coated with fur, and of what colour is this? Has he had shiverings?

Where the skin is moist and of a proper temperature, the absence of fever is ascertained, and particularly if conjoined with no acceleration of the pulse; but a hot, dry, and parched skin, great

thirst, a foul tongue, quickened pulse, and shiverings succeeded by heat, evidently point out the existence of febrile action in the system.

Q. Is the pulse strong, quick, and frequent? Is it feeble and weak? Is it oppressed? Does it intermit?

The beating of the artery at the wrist is termed the pulse, and this depends upon, and takes place at the same time with that of the heart; hence, medical men feel the pulse to ascertain the quickness or tardiness of the blood's motion, the strength of the heart, &c. The pulse in healthy adults is generally from 65 to 75 strokes in a minute, but in acute diseases, is frequently accelerated to 120 or 130 in that space. In children of a year old, its pulsations are from 100 to 120 in a minute; in the fourth, fifth, and sixth year, from 80 to 100, and from the seventh to the twelfth and upwards, about 72.

When the pulse is so far accelerated as to exceed the healthy standard 15 or 20 strokes in a minute, some disorder in the system may be supposed to exist; but it should never be felt by a professional man, or stranger to the sick, until he has been in company with him for a few minutes, as some degree of agitation is apt to be produced on his first appearance, which may considerably affect th pulse.

An oppressed pulse shews that the sanguiferous system is overloaded, that the heart, in consequence thereof, is not able to contract with sufficient force to propel the blood through the arterial system, and, therefore, that there is a necessity for blood-letting. A full strong pulse denotes the like necessity. A small frequent pulse, with a cool skin, indicates weakness: a quick pulse shews great irritation of the brain or nervous system.

When the pulsations rapidly follow each other, it is said to be frequent, which may also be full, strong, and hard, or soft, small, and weak. When the pulsation is performed with great celerity, it is termed quick. When the strokes do not succeed at the usual interval, it is termed intermitting, which kind of pulse arises from an unequal influx of the blood into the heart, from increased irritation or disease of the organ itself. Occasionally it is produced by water effused in the chest, or in the pericardium, which membrane envelops the heart.

Q. Is there a loathing of food, disagreeable taste in the mouth, furred tongue, or nausea in the stomach?

The propriety of exhibiting an emetic will greatly depend upon the presence of these symptoms. By an examination of the tongue, some judgment may be formed of the state of the stomach; as also of the kind, increase, and decline of fever, and likewise the nature of some other diseases.

When the tongue is dry and covered with a dark fur, attended with dejected countenance and wanderings of the mind, there are grounds for suspecting the fever to be of a typhous nature. When the tongue becomes moist, and the edges clean and red, in all dis-

eases we may consider the patient in a convalescent state. Some offending matter may be conjectured to exist in the stomach, when nausea is accompanied by a furred tongue.

Q. Are the bowels in a regular state? Are they much confined, or too open? When did the last motion take place?

In all disorders the state of the bowels ought to be accurately ascertained. In those of a chronic nature, as well as in persons of a delicate constitution, costiveness should be removed by gentle aperient medicines and clysters; but in those of an inflammatory or acute nature, it will be necessary at the commencement to evacuate the contents of the bowels by purgatives (see this Class.) A gentle looseness or diarrhæa proves critical in many diseases; and, therefore, when a purging arises spontaneously during an inflammatory fever. and some other acute complaints, it should not be wholly stopped, but only moderated.

Q. Are the stools copious, hard, or liquid? Are they pale, dark, or bilious?

The consistence of the motions often points out the nature of the disease. When they are liquid and copious, the name of diarrhæa or a looseness is applied to it. When they are passed in small hard balls, are slimy, bloody, and accompanied with griping pains, and a frequent desire to void them, it is termed dysentery. When there is great irritation in the fundament, and little or nothing is voided, it passes under the appellation of tenesmus.

If the stools are dark, slimy, and offensive, it is evident that digestion does not go on properly, and that there is some irritating matter in the intestinal tube. If they are of a pale and clay colour, as is usually the case in jaundice, this points out that the bile does not pass properly into the intestines, owing to obstruction of some kind, or to defective secretion.

Q. If the patient is feverish, have the febrile symptoms abated or gone off at any time, and have they been succeeded by a free perspiration?

Most acute and inflammatory diseases are ushered in by febrile symptoms, which, after a time, are usually relieved, in some measure, by a copious perspiration; and therefore it is of importance to attend to the state of the skin, and where this is dry and harsh to the feel, to endeavour to promote due perspiration by Diaphoretics (See this Class), having first cleared the stomach and bowels, and lessened the quantity of blood with which the arterial system has been overloaded, if such is the case, and which is to be judged by the state of the pulse.

A dry skin favours the accumulation of heat in the system. By the evaporation of perspirable matter in consequence of a moist skin. the body is much relieved of superabundant heat. Where the febrile symptoms go off entirely on the breaking out of a copious perspiration, and there is an interval of one or more days before any fresh paroxysm takes place, then we know the disease to be an ague or intermittent fever: but where they continue for several

days, although the skin is bedewed with a gentle moisture, we ascertain that the fever is of the continued type. When the intervals between the paroxysm are very short, or only just perceptible, remittent fever is the disorder under which the patient labours.

Q. Is the urine of a healthy appearance and voided in due quantity? Does it continue clear and limpid on becoming cool, or does it deposit a sediment?

The appearance and quantity of urine which is voided often enables us to ascertain the real nature of the disease. In diabetes, it is of a limpid colour, somewhat sweet to the taste, and is discharged in a far greater quantity than the liquids which the patient drinks. In diseases of the bladder, kidneys, and urinary canal, there is frequently an obstruction to the voiding of urine freely, and by being retained too long, it acquires a strong smell, is often intermixed with mucus, and upon cooling, deposits particles like sand.

Towards the decline of most fevers, and when they are drawing near a crisis, the urine generally becomes cloudy, or flaky, and upon standing any time in the chamber utensil or a glass, deposits a sediment. In putrid fevers and other malignant diseases, such as the confluent small-pox, &c., the urine is frequently tinged with blood, and has an offensive smell. In hysterical and hypochondriac affections it is always of a pale colour, and voided beyond the usual quantity.

Q. Does the patent breathe with ease or difficulty? Has he a pain in his chest, or side? Is he incommoded by any cough?

In pleurisy, peripneumony, and inflammatory fever, &c., a difficulty of breathing indicates too great a determination of blood to the lungs, or a general overfulness of the vessels; in either of which cases, depletion by the lancet, and evacuating medicines will be requisite. When a difficulty of breathing is accompanied by a pain in the chest and side, it denotes inflammation in the lungs, or the pleura, which is the membrane that envelops them.

An effusion of water in the chest is often accompanied by a difficulty of breathing, which is much increased when the patient lies down. The same happens, indeed, where water is effused in the cavity of the belly. The existence of either of these diseases is readily ascertained by an attention to the various symptoms.

Q. Is there an expectoration, and is it free or difficult? What appearance has it? whether like mucus or purulent matter?

A free expectoration is the means which nature adopts to relieve herself when any inflammatory affection exists in the lungs, or other parts employed in carrying on respiration, or where there is any degree of irritation, in which case, there is frequent coughing. The violence of this will, in a great degree, depend on the viscidity of the phlegm, and the difficulty with which it is spit up. In cases where this is great, pectoral medicines, such as squills, &c. become necessary. Where there is great difficulty of breathing and much coughing without expectoration, we are to re-

gard the patient's situation as dangerous. In all cases of inflammation of the lungs, it may be considered as a favourable omen when there is a free and copious expectoration, and its being gently tinged with blood is by no means an unfavourable symptom, but quite the contrary.

Where the patient is affected with hectic fever, night sweats, and a cough, and the matter which is spit up is opaque, of a yellow and purulent appearance, offensive to the taste, and sinks in water, we may safely conclude that he has tubercles, or a small abscess in the lungs, and that he labours under pulmonary consumption, which sooner or later will destroy life; for few, indeed, recover from this disorder.

Q. What remedies have been administered? What are the effects produced thereby?

A knowledge of these matters will enable us either to continue, or alter the plan of treatment: as likewise to form some opinion whether or not the disease is to be controlled by medicine.

Q. Is the patient readily acted upon by purgative medicines? Is he subject to the piles?

If the bowels are easily excited to action, we should only prescribe medicines of a mild aperient nature, and emollient clysters (See Class of Laxatives), refraining from active purgatives. If he be subject to piles, aloes should never be employed, unless they have been suppressed; in which case it may be advisable to reproduce them by means of it.

Q. Does the action of an emetic occasion any ill effects in general?

There are some people who suffer very considerably during its operation, and to whom it might, therefore, be improper to administer one, unless under the most urgent circumstances.

Q. Is there any peculiarity in the patient's constitution? Is his mind tranquil?

In some persons the pulse is either preternaturally quick, or slow, or there are intermissions between the strokes, and these might excite alarm if we are not conversant that the deviation from the natural standard was not owing to disease, but to a peculiarity of constitution.

As many diseases arise from a disturbed state of the mind, and as all are more or less influenced by it, we must attend to the condition of the mind as well as that of the body. When labouring under depression, anxiety, fear, or any other passion, it should be soothed by every possible means, and hope be encouraged. The beneficial influence of this passion on the body has, in innumerable instances, produced a serenity of thought, and tended to prolong existence, even in the most forlorn situations.

Q. To what diet has the patient been accustomed? Have his habits been temperate or intemperate?

It will be necesary to be informed on these subjects, that the future regimen may be regulated accordingly, and in this respect

much will depend on the violence of the symptoms in febrile and other acute diseases, or the debility and reduced state of the patient in chronic ones. In gout, and a few other diseases occurring in persons who have lived luxuriously, and taken wine freely, it will not be advisable to adopt too spare and abstemious a diet all at once: the change ought to be made gradually.

In addition to the foregoing questions, females must be asked the following ones:

Q. Is menstruation regular? Is it in due quantity and of a proper appearance? Did it exist at the time of the patient's seizure with the other disease, or is it now present?

As no female can long continue in health where this process does not go on regularly, it is of great importance to ascertain whether or not it comes on at the accustomed periods. It will also be proper to know that the secretion is in due quantity and of a proper appearance; because, when a woman labours under the whites, a considerable change is produced on the menstrual discharge by this disease. A knowledge as to whether it exists or not at the time, is also requisite, that no remedies may be employed which may be likely to arrest its natural course.

Q. Has menstruation been checked or suppressed by any exposure to cold, or from defective energy in the constitution?

According to the cause which has checked menstruation, or produced either a suppression or obstruction, so should we employ the remedies. See Menstruation and its Irregularities.

Q. Has the woman any reason to suspect that she is prega nt? Is she a nurse?

As pregnancy gives rise to many indispositions and complaints, which can be removed only by delivery, but may be palliated by medicines, as correct information as possible should be obtained as to the probability there may be of the woman's ailments having arisen as the consequences of conception. For instance, if menstruation has become suppressed, as a consequence of pregnancy, it would be next to madness to attempt to reproduce it.

If she has an infant, it may be necessary to enquire whether or not she suckles it wholly, or feeds it occasionlly; as many diseases arise in women of a delicate constitution by suckling too frequently, or continuing it for too great a length of time; and particularly atrophy, or nervous consumption. In some cases it may become necessary to desist from suckling, either for the benefit of the nurse or child, or both. Moreover, the practitioner, by not knowing that the woman has an infant at the breast, may administer medicines to her which might prove injurious to the child.

It will be proper to put the following questions in the diseases of children:

Q. Is the child of an age for us to suspect that it is teething? Are its bowels open, and what appearance have the stools? Are they accompanied with or preceded by gripings.

The symptoms which attend dentition will be found pointed out

under this head, as also the treatment which is most proper. Where there is much griping, with green stools, &c. proceeding from improper food, or the nurse's milk disagreeing with the child, an immediate change will be necessary, or medicine will produce no good effect.

Q. If the child is feverish, has it had the small pox, measles, scarlet fever, &c., and do these diseases prevail in the neighbourhood?

Where febrile symptoms are present, they may be the precursors of one or other of these diseases, or they may arise from worms, or a diseased state of the stomach and bowels.

Q. Has it a cough? Does it seem of a spasmodic nature?

In the latter case, we may suspect the existence of the whooping cough.

Q. Is its belly large, and does it pick its nose, or grind its teeth when asleep? Is its breath offensive and its desire for food variable?

These symptoms present just grounds for supposing that worms exist either in the stomach or intestines of the child.

Q. Has it emaciated limbs, with large joints, and a protuberant belly?

When these appearances present themselves, we may be assured that the child is much disposed to become ricketty.

OF FEBRILE DISEASES.

Febrile Diseases being of that class with which the human frame is most liable to be attacked, I shall commence with them, and it seems necessary to mention that fevers are either primary disorders not depending on any other, or they are symptomatic and depend on some other; but the most usual division of fevers is into Intermittent, Remittent, and Continued. Those of the latter character, as being of more frequent occurrence than the others, seems deserving of the first consideration.

Increased heat and frequency of the pulse without any primary affection, preceded by lassitude, languor, and these, after a short time, succeeded by chilliness, shiverings, depression of strength, and a disturbance in many of the functions, are the peculiarities or characteristics of the presence of fever.

The essential nature or immediate cause of fever has not as yet been satisfactorily ascertained. Some writers and physicians have supposed this to consist in a spasmodic constriction of the extreme vessels on the surface of the body: others have conjectured that it consists in some noxious matter introduced into or generated in the body, the increased action of the heart and arteries being the effort of nature to expel this morbid poison; whilst there are those again who assert that the primary and local seat of fever, not dependent on any other disease, is nothing more or less than topical inflammation of the brain.

These opinions are grounded on mere conjecture, and the only just conclusion that can be formed of the presence and nature of fever is, not to be influenced by any one symptom alone, for there is none invariably attendant on it, but to make an assemblage of the symptoms; and thus considering them conjointly, we are to look on it as a disease which affects every part of the body, the circulation, absorption, nervous system, and mind; hence the incoherence of expression, delirium, and stupor, so frequently occurring in fever.

OF CONTINUED FEVERS.

These fevers are so called, because they go on their course without any intermission or considerable remission for a number of days, or some weeks.

Fevers of the continued form are as follow, viz.: the Inflammatory, the Nervous or Mild Typhous Fever, the Mixed or Simple Continued, the Malignant or Putrid Typhous Fever, and that known under the appellation of the Yellow Fever. There are also the Milk and Puerperal Fevers attendant on Women lately delivered.

These several fevers are to be distinguished from each other by the different characters and appearances which are assigned to them in the following sheets.

This kind of fever is much more frequently met with in temperate and cold climates than in warm ones; and even when it does occur in the latter, the inflammatory stage is of short continuance, for it is apt to partake somewhat of a typhous type very soon.

Symptoms.—In northern countries, inflammatory fever is a disease of very frequent occurrence, and is characterized by the following symptoms: It comes on with lassitude and much anxiety, which after a time are succeeded by chilliness, alternating with transient flushes, and terminating in a violent and continued heat; the whole countenance is of a deep red, and the eyes and skin are suffused with the same colour; there is great thirst, the tongue is coated with a white fur, the urine is scanty and high coloured, the bowels much confined and costive, there is a morbid sensibility and intolerance of usual impressions, the judgment is much impaired, and the rest disturbed: the pulse is strong, full, and frequent, the respiration somewhat hurried, and delirium takes place.

Causes.—Persons of a full habit of body, and strong muscular system, are predisposed to attacks of inflammatory fever; but the causes which produce it are intemperance, violent exercise, sudden alternations of temperature, and the application of cold to the body when much heated; exposure to the powerful rays of the sun, the suppression of usual evacuations, the sudden repulsion of eruptions, strong passions of the mind, and too free a use of spirituous, vinous, and other fermented liquors.

It will be easy to distinguish an inflammatory fever from one of a typhous nature, by the more sudden accession of the disease; by

its arising from the common causes just enumerated, and not from contagion; and also by the strength and hardness of the pulse, the whiteness of the tongue, and the very high colour of the urine, and the prevalence of violent delirium.

The symptoms which denote a favourable termination to the disease are as follow: a gentle moisture coming out upon the skin about the seventh day, succeeded by a universal and natural perspiration; the urine depositing a sediment like fine brick dust, or becoming turbid and cloudy soon after being voided; the bowels being very open, the sensibility being somewhat diminished, the judgment clear, a flow of blood taking place from the nose, a suppuration of some glandular part, or the formation of an abscess, and the pulse from being before strong, full, and frequent, becoming slower and softer.

The symptoms which denote great danger, are very laborious respiration, intense pain in the head, with great incoherency or furious delirium, picking at the bed clothes, a strong, hard, and frequent pulse, with other tokens of excessive action, by the inordinancy of which the disease frequently proves fatal, or by a determination to internal organs, when the disease runs into inflammation of the brain, lungs, liver, &c. Involuntary evacuations by stool and urine, startings of the tendons, and hiccup, are the usual fore-runners of death.

Treatment and Regimen.—Our attention in this fever should be directed to diminish the quantity of the circulating fluids, thereby lowering the tone of the vascular system, and to allay the increased excitability of the brain. The first is to be effected by bleeding, purging, diaphoretic medicines which determine to the surface of the body, and the occasional administration of laxative clysters. The second, by carefully guarding against all impressions upon the senses, stimulating operations of the mind, noise, the strong impressions of light, the effects of motion, and any irritation from the contents of the alimentary tube.

To diminish the quantity of the circulating fluids and tone of the venous system, a quantity of blood, proportioned to the age and habit of the patient, should be drawn off as quickly as possible from a vein in the arm, making the orifice of the wound of a sufficient size to allow the blood to flow in a full stream, and not trickle down the arm; a matter of more importance than what it is too often considered in many inflammatory disorders. If the patient is an adult and of very full habit, from sixteen to twenty ounces may be taken away at once, but if more youthful and of a delicate frame, we need not exceed ten or twelve ounces.

The next step to be taken is to administer an active purgative (see Prescriptions 1, 3, or 4, Class of Purgatives), if neither nausea or vomiting attend. Where they are present, it may be advisable to evacuate the contents of the stomach, and remove the offending matters contained in it, by giving a gentle emetic (see Prescriptions 1, 2, or 4, under this Class) previous to any purgative being taken.

After the operation of these medicines, it will be necessary to examine the state of the pulse again, as well as the appearance which the blood has put on when cold. If the latter exhibits a thick coat of yellow coloured lymph on its surface, and the fullness, hardness, and frequency of the pulse continue unabated, it will be advisable to have recourse again to bleeding, proportioning the quantity of blood which is now drawn off to the urgency of the symptoms and strength of the patient. A third bleeding, either on the same day or succeeding one, may occasionally be requisite when the intentions we have in view are not answered by the two former operations.

In those cases where a reduction of the pulse and intense heat takes place, but still there remains a considerable pain in the head, it may be advisable, after the first or second bleeding, to apply three or four leeches to each temple, encouraging their effect when they drop off, by bathing the parts well with linen rags, or a sponge dipped in warm water.

Where there is a considerable determination of blood to the head with furious delirium, it will be necessary to apply a large blister to the neck, or high up between the shoulders; and having had the head completely shaved, to keep linen cloths wetted in cold vinegar and water over the whole scalp and forehead, frequently dipping them afresh, or when they become dry and warm.

If the patient is incommoded by a difficulty of breathing, and pain in the chest or side, the loss of blood should be repeated, and a blister be applied over the part that is painful.

It is of consequence to produce a moisture on the skin in inflammatory fever, and indeed in most others, as we shall thereby assist in taking off the constriction which has been supposed to exist in fevers. The medicines best adapted to this purpose are the common saline draught, with about the sixth of a grain of tartarized antimony in each dose, or we may prescribe two grains of antimonial powder, made into a pill with a little confection of roses, to be washed down with three table-spoonfuls of the saline mixture. (See Class of Diaphoretics. P. 5.) Either of these remedies will be likely to bring out a gentle moisture over the whole body. At night, the patient's feet may be put into warm water for about a quarter of an hour.

To abate thirst, he may drink plentifully of diluting liquors, such as Imperial, barley water acidulated with lemon juice, or an infusion of preserved tamarinds; and, with the view of moderating the intense heat of the body, various parts may be washed occasionally with a sponge dipped in cold water, with an addition of vinegar, or a small proportion of rectified spirit. The coolness which will ensue from the evaporation of this application will greatly refresh the patient, and much heat with be abstracted.

As a refrigerant, we may likewise advise small doses of the nitrate of potash, which we can dissolve in two or three table-spoon-

fuls of the common saline mixture. It will be best not to exceed ten or twelve grains of the nitre in each dose.

Throughout the whole course of the disease, it will be proper to keep the bowels open, and if one or too stools do not spontaneously take place, some mild purgative as before mentioned, assisted by a laxative clyster (see this Class, P. 16,) should be administered. If a looseness arises naturally, it ought not to be checked on a sudden, more especially in the beginning of the fever ; but if urgent, and the patient's strength is already much reduced by the long continuation of the disease, it ought then to be restrained by some medicine of a moderate astringent nature. (See Prescriptions 3, 5, or 6, Class of Astringents.)

If the pulse sinks and the extremities become cold in consequence of exhaustion, or the violence of the fever, cataplasms of mustard should be applied, and camphor mixture, ammonia, and æther combined together be given. (See Class of Stimulants, P. 3, 5, 13.)

To moderate and allay the increased excitability of the brain, which takes place in inflammatory fever, it will be necessary that the patient's chamber be kept cool, but rather dark, and that his bed be covered lightly with clothes ; that all noise and unnecessary attendants or visitors be forbidden, and that animal broths, as well as all vinous, spirituous, or other fermented liquors, be withheld from him, supporting him with preparations of barley, Indian arrow root, tapioca, and the like, in as liquid a form as possible.

On the going off of the fever, it will be advisable to pay a strict attention in carefully avoiding all causes likely to excite a return of the disease.

OF THE NERVOUS OR MILD TYPHOUS FEVER.

The characteristics of this fever are great depression of strength quickly coming on ; the animal functions much disturbed, considerable stupor, the urine but little changed, the heat of the body not greatly increased at first, the pulse being weak and small, but in general quick, the bowels rather confined, and the disease contagious, particularly where cleanliness and a free admission of fresh air are neglected.

Symptoms.—It comes on with lassitude and general languor, loss of appetite, dejection of spirits, dulness, and confusion of thought, and alternate chilliness and flushing. As the disease advances, these are succeeded in a few days by a short anxious respiration, giddiness and pain in the head, aching pains over the whole body, nausea and vomiting, and a frequent, weak, and often intermitting pulse. The tongue, from being at first moist, is now covered with a white mucus, but afterwards becomes dry, of a dark brown colour, and is tremulous ; the thirst is not great, the urine is pale and watery, the bowels are rather confined or costive, sweats break out on the forehead and backs of the hands, whilst at the same time

the palms are dry and glow with heat ; the nervous system is much affected with tremors and twitchings, and the patient keeps constantly picking at the bed-clothes with his fingers, and mutters to himself. It seldom happens in this species of typhus that the delirium is violent or furious.

The disease proceeding, the heat frequently becomes intense, with great thirst ; the tongue is very dry, covered with a brown fur, and is often chapped ; the teeth are slightly incrusted with a dark mucus of the same nature, there is great restlessness and uneasiness with flushings in the face, redness of the eyes, and an increase of the incoherency and delirium ; the urine is scanty, but of a higher colour than at first ; the pulse is weak, quick, and unequal ; the heats and chills are very fluctuating and irregular, for sometimes there is a sudden glow and florid colour in the cheeks, while the tip of the nose and ears shall be cold, and the forehead perhaps in a dewy sweat : sometimes the extremities are cold, while the blood is determined to the head, and there is great sensibility to light and noise. All the symptoms generally increase towards the approach of night.

Sometimes a profuse discharge of viscid ropy spittle, which it is difficult for the patient to get rid of, arises ; this affords no relief ; on the contrary, it adds to his sufferings, by clogging up the mouth and throat, and thereby greatly impeding both his swallowing and breathing. Occasionally, a disposition to immoderate sweating takes place, or a severe purging comes on. In those cases which terminate fatally, the extremities become cold, the excretions are passed involuntarily, and hiccups, with startings of the tendons, manifest themselves at the close.

Causes.—Those which pre-dispose to an attack of this fever are a weak and delicate habit of body, accompanied by a morbid sensibility and irritability ; poor living and a defect of proper nutritive food ; too free an indulgence in enervating liquors ; excess in venery ; profuse evacuations ; depressing passions of the mind, and a sedentary studious life, &c.

The causes which bring the disease into action are exposure to cold air united with moisture, intemperance, anxiety, grief, impure air, and contagion. In all probability the contagious or non-contagious nature of typhous fever is dependent partly on the quantity or concentration of the effluvia, or vapours thrown off from the body of the sick, and partly upon the closeness or openness of the patient's apartments ; or, in other words, the chance of its being propagated from one individual to another is greatly dependent on the above circumstances. This species of fever is to be distinguished from typhous of a malignant and virulent nature, by the attack being more gradual, and the symptoms milder than in the latter. In the progress of the disease, by the absence of those of putrescency and malignancy enumerated under the latter head, and by its being accompanied with less heat and thirst, less frequency of the pulse, and little or no vomiting of bilious matter.

Mild typhous fever has no regular critical days ; nor is it often that any thing completely critical occurs. About the seventh day, there is generally an increase of the symptoms. If the patient dies it is usually on or before the fourteenth day. If he can be supported to the twentieth or thereabouts, he commonly escapes ; but this fever sometimes runs on for a month or more, and so completely exhausts the sick, that they sink from debility alone. Occasionally, it degenerates into the malignant and putrid type.

The symptoms which denote a favourable termination are about the seventh, fourteenth, or twenty-first day, the tongue becoming moist first at its edges, afterwards on the surface ; a gentle moisture breaking out pretty generally on the body, the pulse being fuller and slower than at first ; the urine increasing in quantity, being turbid, and then depositing a sediment ; the incoherency or delirium ceasing ; the sleep more natural ; the appetite returning ; the appearance of scaly eruptions about the lips, or an inflammatory tumour making its appearance in some part of the body, or a gentle diarrhæa ensuing.

A continued state of insensibility or confusion of intellect, or low muttering delirium, extreme debility, the presence of convulsive twitchings and startings, a tremulous motion of the lips, tongue, and other parts, impeded power of swallowing, involuntary evacuations, a small rapid and intermitting pulse, great anguish or anxiety in the countenance, picking at the bed-clothes, catching at imaginary objects in the air, and hiccups, are to be looked upon as very unfavourable symptoms, and point out that the life of the patient will be sacrificed to the severity of the disease.

Treatment and Regimen.—The low nervous fever, or mild typhous, attacks a person with some mildness at first, and two or three days perhaps elapse before the certainty of the disease can be ascertained ; but when it is once established, it usually runs its course in defiance of medicine, and whether it terminates fatally or otherwise, will, in a great measure, depend on the natural constitution of the patient, the attention that may be paid to the urgent symptoms which arise in the course of the disease, and supporting the strength by a proper and nutritive diet when debility becomes obvious.

It is of great importance to check the disease, if possible, at its outset ; and with this view we should advise a gentle emetic (See this Class of Medicines, P. 1.) as soon as the patient finds himself considerably indisposed, particularly if nausea and sickness at the stomach are present. The operation of this being over, the contents of the intestines should be freely evacuated by some active purgative (See this Class, P. 1, 3, or 4.) These remedies, although they probably may fail in removing the disease, will generally succeed in abating the violence of the symptoms.

In the majority of cases of this species of typhous fever, it will not be necessary to have recourse to the lancet, but now and then cases do occur where the drawing blood from the arm may be re-

quisite; as for instance where the disease attacks a person of a full robust habit, and there is evidently a great determination of blood to the head, giving rise to redness of the eyes, violent flushings in the face, and much intellectual affection. In no other cases will it be proper to bleed, nor will the operation be advisable in any where the disease has passed its first stage. Beyond the second or third day after the fever is perfectly formed, drawing blood from the arm should not be attempted.

When the head is occupied after this period with great pain, suffusion of the countenance, stupor, low mutterings or delirium, the application of a few leeches to the temples, and afterwards shaving the head and laying on several folds of linen cloths wetted in cold vinegar and water over the scalp and forehead, taking care to re-wet them frequently, will be more appropriate and safe than bleeding from the arm.

Should the affections of the head not be much relieved by these means, it will be advisable to apply a large blister between the shoulders or over the shaven scalp; but, perhaps, the former will be preferable, as the patient will not then be deprived of the benefit to be expected from the application of cold, through the medium of wetted linen cloths.

To assist the effects of the blister, the feet may be put into warm water at night. If the heat of the surface of the body is steadily and considerably above the natural standard without any sense of chilliness being present, or there being any general or profuse perspiration, we may employ affusion, or immersion of the whole body in cold water. These remedies, if judiciously used under the circumstances which will be stated in the treatment of malignant typhous, rouse the dormant susceptibility, so as to induce a new action, as it were, of the nervous system, removing spasmodic contraction of the extreme vessels, and carrying off a large portion of morbid heat by evaporation, and the remainder by insensible perspiration. They are, however, only applicable and safe at an early period of the fever.

When the disease is of some days standing, the heat moderated, and the patient's strength reduced, ablution of the body, by means of a sponge wetted in vinegar properly diluted with tepid water, will be more eligible. These different modes of proceeding usually produce a grateful and refreshing sensation to the sick, they abate the febrile heat, and bring out a moisture on the skin, not unfrequently followed by sleep.

To assist in promoting these ends, it may advisable to give the patient some gentle diaphoretic medicine from time to time, such as the saline draught in combination with camphor, or a solution of the acetate of ammonia, (See P. 6, 7, or 9, Class of Diaphoretics); but we ought at the same time to avoid exciting profuse sweating, which might be productive of injury, by increasing the prostration of strength, or debility which so universally takes place in this species of fever.

Should such sweats arise spontaneously at any period of the disease, they should be stopped as soon as possible, by giving cooling drinks properly acidulated with lemon or orange juice, at the same time covering the bed lightly with clothes, and keeping the chamber very cool by a free admission of fresh air, and without a fire in it. A use of other vegetable and mineral acids will likewise be proper. The latter will be particularly so at an advanced stage of the disease should any putrid symptoms become manifest.

In the course of the disease it sometimes happens that a purging arises which does not prove critical, but, on the contrary, very much exhausts the patient. In such cases, the cretaceous mixture, &c. (See P. 4th or 5th, Class of Absorbents) should be administered until the bowels acquire their usual steadiness.

Towards the height and decline of this fever, it sometimes happens that there is an unpleasant coldness in the lower extremities, in which case it will be advisable to apply cataplasms of a stimulating nature to the soles of the feet (See Class of Stimulants, P. 13,) or a small blister to the inside of each leg towards the ankle, giving, at the same time, the camphor mixture with æther. See the same Class, P. 3.

Where great incoherence of ideas with low muttering delirium prevail, we should have recourse to camphor, musk, opium, and the application of a blister to the head or between the shoulders. (See Class of Antispasmodics, P. 3 and 4.) In this species of fever and under the circumstances just mentioned, opiates may be administered with safety and advantage, as they not only allay irritation, but procure sleep. It will be best, however, to combine them with some diaphoretic, such as the solution of the acetate of ammonia, or any of the preparations of antimony (See P. 6, 7, or 10, Class of Diaphoretics.)

If startings of the tendons or convulsions arise in the course of the disease, the most appropriate medicines to relieve and remove them will be opium, camphor, and musk, (See the Class of Antispasmodics, P. 3, 4.)

At an advanced stage of the disease, it sometimes happens that there is a profuse secretion of viscid spittle approaching nearly to a salivation; and that the throat, mouth, and inside of the lips, are beset with little white ulcerations, resembling those in the thrush. To obviate and heal these, it will be necessary to use three or four times a day a wash, or gargle, composed of an infusion of roses with a little of the honey of borax. (See P. 1, Class of Detergents.)

During the first stage of the fever, the patient's diet should consist wholly of the different preparations of Indian arrow root, sago, tapioca, and barley; towards the middle period, broth of lean mutton and beef may be allowed; and as soon as debility is apprehended or becomes obvious, a nutritious diet must be used, and the patient's strength supported with wine in a diluted state, as in the form of negus. The quantity to be allowed daily must be pro-

portioned to existing circumstances, such as the age of the patient, the debility present, and the effect produced by it. During the use of wine, attend to the pulse, and direct it more or less freely, according as this is rendered slower, firmer, and more distinct. Bottled porter is a good liquor, and if relished by the patient, may be tried, as may also cider where wine cannot be afforded.

It is of the utmost consequence in this species of fever to confine the patient to bed, covering it lightly with clothes; to keep him as calm and quiet as possible, by prohibiting unnecessary attendants about him, and somewhat darkening the chamber, taking care, at the same time, that there is a free ventilation through it, and fresh air admitted. If possible, do not let sleep be wanted in the night; should proper rest not take place in the natural way, it ought to be procured by administering a gentle opiate as before-mentioned.

Whenever a general relaxation of the skin occurs, or an intermission of the fever appears with turbid urine, we may then prescribe some of the light preparations of the Peruvian bark, such as the infusion or decoction, with an addition of fifteen or twenty drops of the diluted sulphuric acid to each dose, giving a due quantity of wine throughout the twenty-four hours at the same time. If the bark should not sit easy on the stomach, we may substitute the sulphate of quinine, either in the form of a pill, as noticed under head of Intermittents, or in that of a draught, as prescribed in P. 27, Class of Tonics, conjoined with an infusion of cascarilla, calumba, gentian, or quassia. See the same Class, P. 4, 5, 6, or 7.

Throughout the whole course of the fever a strict attention should be paid to the state of the bowels, so as not suffer a day to pass without a stool, and where none arises naturally, the aid of some laxative medicine, assisted occasionally by an aperient clyster, should be resorted to. See the Class of Laxatives, P. 16.

To guard against the possibility of the contagion of this fever being communicated to the attendants on the sick, or others of the family, it will be advisable to attend strictly to the rules pointed out under the head of Means for Preventing the Extension of Infectious Diseases, assisted by fumigations.

Towards the decline of nervous fever, a temporary alienation of the mind now and then occurs, particularly among women. In such cases the treatment should consist in keeping the patient in a state of as great tranquillity as possible, in allowing a generous diet, and administering tonic medicines. See this Class.

A change of air, moderate daily exercise in a carriage or on horseback, stomachic bitters joined with the bark and chalybeates, and a generous regimen, will greatly contribute to restore the patient to his accustomed health, and expedite the removal of that weakness and high degree of excitability which this fever is apt to leave behind; and, as it is very apt to return from any exposure to cold, or act of intemperance, great caution will be requisite for preventing a relapse, which would endanger life more than the first attack, on account of the debilitated state of the patient.

OF THE MALIGNANT TYPHOUS OR PUTRID FEVER.

This fever, from frequently prevailing in places and situations where the air becomes contaminated from accumulated human exhalations, and not paying a proper attention to ventilation, and strict cleanliness, is known under various names, such as jail fever, camp or garrison fever, or hospital fever; but that which is here applied to it appears the most appropriate; and it ought to be considered in no other light than as a most virulent and aggravated form of typhous fever, being attended by symptoms which denote great malignancy, and a strong tendency to putrescency.

Symptoms.—Its attack is marked by unusual lassitude and soreness, languor, dejection of spirits, sighing, rigors succeeded by flushing heats, pains in the head, back, and extremities; great depression of strength, and an expression of anguish in the countenance; the heat of the skin is sometimes moderate, although in some instances it rises to a degree greater than in any other fever, and is peculiarly acrid and burning to the touch. The pulse is sometimes at first hard, tense, and quick, but soon becomes slow, small, and unequal; there is considerable oppression at the chest, the breath is hot and offensive, the tongue, from being white and moist at the commencement, grows daily more dark coloured and dry, until at length it is covered with a brown or black crust; fetid matters of the same nature and colour accumulate about the teeth and lips of the mouth, nausea and bilious vomitings ensue, there is a preternatural throbbing of the arteries in the neck and temples, with intense pain in the head and singing in the ears, a ferrety redness of the eyes, and perhaps a ferocious delirium. The urine, at first, is pale, then becomes extremely high coloured and sometimes fetid: in the last stage of the fever, it not unfrequently deposits a black sediment.

At an advanced stage of the fever, blood is effused under the skin, forming purple spots or blotches; a discharge of this fluid breaks out from different parts of the body, small gangrenous ulcerations appear in the mouth and throat, and not unfrequently mortification takes place at the extremity of the spine, or lower part of the back, as well as on the buttocks, from long-continued pressure; what passes off by urine and stool come away involuntarily, and are extremely offensive, the pulse sinks and intermits, the extremities become cold, hiccups ensue; and, before dissolution, the patient exhibits a complicated appearance of misery.

Causes.—The causes which predispose a person to an attack of this fever are all those which produce general debility, and which have already been enumerated under the head of nervous or mild typhous fever. A close and humid state of the atmosphere, inattention to proper cleanliness, accumulated human exhalations, and air contaminated from not allowing a proper ventilation, are very frequently the exciting causes of malignant fever; hence it is so pre-

valent in the houses of the poor, in jails, camps, hospitals, and prison ships, when such places are much crowded, and due attention is not paid to cleanliness and a free ventilation. The most general exciting cause of this fever, however, is contagion applied immediately from the body of a person labouring under the disease; but no doubt it may be conveyed also in clothes, and other similar articles. It has been supposed by some physicians that the exhalations or effluvia arising from animal and vegetable substances, in a state of decomposition, are capable of giving rise to this species of fever; but this point is doubtful.

Malignant or putrid fever is readily to be distinguished from the nervous or mild typhous by the great violence of the different symptoms at its commencement; and from the inflammatory fever, by the sudden and great prostration of strength which takes place immediately, or very soon after, its attack; by the acrid and more intense heat of the skin, by the smallness yet greater quickness and hardness of the pulse, by the tongue and teeth being coated with a brown or black fur, and by the purple spots or petechiæ, which so frequently, although not always, appear dispersed over different parts of the body, together with other symptoms of putrescency before mentioned.

When the patient is not destroyed by this fever in the course of seven or fourteen days, there may be a chance of his surviving it, but when he surpasses twenty-one days, recovery is commonly the consequence; yet there are instances of fevers of this nature extending to the sixth week, but these could not have been attended with a putrescent state of the fluids from the first of their attack.

The favourable signs are an abatement of the febrile heat and thirst, a gentle moisture diffused equally over the surface of the body, succeeded by an increased strength of the pulse, the tongue becoming cleaner and more moist, the urine depositing a turbid sediment, the stools loose, the dilirium and stupor subsiding or going off wholly, a scabby eruption appearing about the lips and mouth, the spots on the body, when any exist, being rather of a florid red colour than of a purple, the prostration of strength not being very great, and a suppuration of some gland taking place.

The signs which are to be regarded in an unfavourable light are extreme debility, difficulty of swallowing, very laborious respiration, great restlessness and anxiety, perpetual watchfulness, high delirium, a dry black tongue, nausea or constant vomiting, yellowness of the skin, fetid and involuntary discharges of both urine and stools, dark or livid petechial eruptions dispersed over the body, passive discharges of blood from the different outlets, black and gangrenous ulcers in the mouth, blistered places becoming gangrenous, cold clammy sweats, a cadaverous smell of the body, and startings of the tendons.

Treatment and Regimen.—In proceeding judiciously, and giving the patient every chance to recover, our attention must be directed at first to the moderating the excessive febrile action, and after-

wards to the supporting the patient's strength, and obviating the disposition in the fluids to putrescency.

To answer the first of these intentions, it will be advisable to give an emetic, followed up soon afterwards by some gentle purgative, as advised under the head of mild typhous; or we may substitute about four grains of the submuriate of mercury with a scruple of jalap, either in the form of a powder, or made into pills with a little common syrup.

Having adopted these preliminary and very proper steps, we should, as soon after as possible, have recourse to affusion of the whole body with cold water; but this is only to be done under the circumstance of the heat thereon being considerably and steadily above the temperature of health, or what is natural; and therefore the most advantageous time for using either this remedy or immersion, is when the febrile heat is at the height, or very soon after it has begun to increase, which is generally from six to nine in the evening; but the late Dr. Currie, of Liverpool, who first brought the application of cold water into notice in Great Britain, has recommended affusion therewith at any time of the day, when there is no great sense of chilliness present; when the heat of the surface is steadily above what is natural, and when there is no general or profuse perspiration.

When the remedy is to be had recourse to, every arrangement ought to be made before the patient is removed at all, that all unnecessary disquiet and fatigue may be avoided as much as possible.

It is only in the early stage of this and other contagious fevers, however, that affusion, or even sprinkling the body with cold water, can be employed with safety and advantage. When the disease has been of six or seven days standing, it will be more advisable to substitute tepid ablution, or sponge the body over with vinegar sufficiently diluted with water of a moderate temperature.

At the commencement, or in the early stage of malignant fever, the symptoms now and then run high, and there is seemingly so great a determination of blood to the head, as to require bleeding. The propriety of such an operation is somewhat doubtful, and where resorted to, should only be done during the first twenty-four or thirty-six hours, and even this solely in cases of urgency and violence. No injury will arise from the application of a few leeches to the temples, where there is great pain in the head with delirium, or much stupor at the commencement of the disease, and in most instances, they will be sufficient; if not, the head ought to be shaved, and linen cloths, wetted in vinegar and cold water, be kept constantly applied over the whole scalp and forehead. Should this means also fail in removing or relieving the pain, delirium, or stupor, a happier effect may possibly result from the application of a blister between the shoulders, if the symptoms do not threaten a tendency to putrescency; if they do, the blistered parts might become gangrenous.

During the first state, after having cleared the stomach and bowels by an emetic and purgative, it will be advisable to promote a gentle moisture on the surface of the body, by means of very small doses of tartarized antimony in a solution of the acetate of ammonia, and united with some mild cordial, such as the camphor mixture. See the Class of Diaphoretics, P. 6, 7, or 8.

Throughout the whole course of the disease a stool ought to be procured daily, and where nature is defective in this point, the intestines should be cleared of all irritating and undigested matters, by giving, as the occasion may require, a few grains of rhubarb, conjoined with a grain or two of the submuriate of mercury; or any other gentle laxative medicine may be used, now and then calling in the aid of an aperient clyster. A little mild soap dissolved in warm water, will answer the purpose of procuring a stool, perhaps, as well as any other clyster.

The second indication pointed out in the treatment of this fever, is to obviate any tendency to putrescency, and to support the patient's strength. With this view, the strictest attention must be paid to cleanliness, the linen both of the patient and that of the bed, be changed frequently, the apartment should not have a fire in it, but be frequently sprinkled with warm vinegar and water, or camphorated spirits, and kept well ventilated by an admission of fresh air constantly through it; and to prevent the extension of the contagion to the attendants or rest of the family, fumigation with the muriatic or nitric acid gas may be employed in the manner mentioned under the head of the means for destroying the powers of contagion.

To assist these means in producing the desired effect, a free use of acid and acescent fruits, such as grapes, currants, oranges, &c. should be allowed; together with acidulated drinks, wine made into negus with orange juice, or fermenting liquors, such as an infusion of malt with yeast, or even porter, &c. We are also to have recourse to medicines which counteract the tendency to putrescency, and more especially the bark in combination with mineral acids; but a decided preference is due, I think, to the muriatic. Various forms of these medicines are given under the head of Antiseptics. See this Class. Should the bark in substance not sit easy on the stomach, the decoction, or infusion may be substituted, or we may try the sulphate of quinine.

If these also produce any unpleasant effect, we may try an infusion of cascarilla, orange peel, or snake root, made in the same way as the decoction of the bark, and employed in the same dose, combined with the tincture and acid. See the Class of Tonics.

Clysters of carbonic acid gas, or of acidulated waters, have sometimes been resorted to in this fever, where symptoms of putrescency have appeared, and the oxygenated muriate of potash, as also the oxygenated muriatic acid, have been given internally in bad cases. See the Class of Antiseptics, P. 5, and 8.

Should a discharge of blood take place from any of the outlets

of the body, the infusion of roses in addition to other antiputrescent remedies, but more especially the oxygenated muriatic acid, must be given.

If ulcerations of the nature of thrush appear in the mouth, antiseptic gargles, similar to those recommended in ulcerated and malignant sore throat, should be used.

In the course of the disease, it sometimes happens that a slight purging, accompanied by a gentle moisture on the skin, arises towards the close of the fever, and assists in carrying it off; but if no such critical effect ensues, we should administer medicine without any loss of time, to put a stop to it. See P. 3, 5, or 6, Class of Astringents.

At an early stage of the fever, it would be improper to employ opium in any form; but towards the close of the disease, where the pain in the head, stupor, or delirium have subsided, we may make trial of an opiate combined with some gentle diaphoretic. See the Class of Anodynes, P. 5 or 6.

In the first stage of the disease the patient should be restricted to a diet consisting of light preparations of barley, Indian arrow root, tapioca, and sago, without any wine; but towards the middle period, or when symptoms of debility become apparent, a more generous diet may be allowed, and then beef tea, chicken, or veal broth, &c. may be substituted. We may also allow a moderate quantity of port wine; but this should always be diluted with water, and made pleasant by the addition of a little lemon or orange juice.

From the length of time this fever goes on, it often leaves the patient when he escapes with his life, in a very reduced and debilitated state; to obviate which, and assist in recruiting his usual strength, he should enter on a course of tonic medicines, such as an infusion of cascarilla, calumba, gentian, quassia, &c. conjoined with the sulphate of quinine (See Intermittents) or the tincture of bark, and a few drops of the diluted sulphuric acid; and if these do not answer the intended purpose, the further aid of chalybeate medicines, or waters of the same nature, may be advisable, together with regular daily exercise on horseback or in a carriage, and a change of scene and air. For various forms of the above medicines, see the Class of Tonics.

OF THE COMMON CONTINUED FEVER.

This is the species of fever which is most usually met with in temperate climates, and has generally been considered as a compound of the inflammatory and the milder kind of typhous, being usually attended with the symptoms of the former at its commencement and middle stage; but towards its termination, with those of the latter, particularly when the disease has been of many days continuance.

Symptoms.—An attack of this fever is commonly ushered in with some degree of lassitude, languor, or sense of debility, toge-

ther with yawning and stretching, and a sensation of universal coldness that at last amounts to shivering, which is succeeded by flushings at first, and then by a considerable degree of heat over the whole body. The skin becomes hot and dry, the tongue white and parched, there is a considerable thirst, violent pain in the head, universal restlessness, anxiety and oppression at the chest, the bowels are costive, the stomach incommoded by frequent nausea and an inclination to vomit up its contents, and the pulse is strong, hard, and frequent, beating from 100 to 120 in a minute. Towards evening there is usually an increase of the febrile symptoms, with some degree of incoherency or slight delirium.

These symptoms continue probably for several days with no great variation; but at length the tongue, from being at first whitish, becomes somewhat streaked with a yellow or brown fur; the pulse loses its strength, yet retains its hardness and becomes quicker; the strength is considerably depressed, and the disease now assumes somewhat the character of the nervous or mild species of typhous fever.

Where the disease is to prove fatal, either from the severity of the symptoms or its very long duration, picking at the bed clothes, startings of the tendons, hiccups, coldness of the extremities, involuntary discharges by stool and urine, with a sinking or intermitting pulse, come on; but when no such appearances are to be observed, the disease goes off, perhaps, by some critical evacuation, either on the seventh, ninth, eleventh, fourteenth, seventeenth, or twentieth day, these being supposed by some physicians of great eminence to be the days on which the termination of this and other continued fevers principally occurs.

The symptoms which denote the approach of a crisis are an abatement of thirst, the tongue losing its furry coating, and becoming clean and moist, the skin feeling soft to the touch, with a gentle moisture diffused equally over its whole surface, the secreting organs duly performing their several offices, the urine depositing flaky crystals of a dirty red colour, or becoming turbid some little time after being voided, a gentle purging taking place, and the pulse being moderate, soft when pressed upon by the finger, and nearly of its natural speed.

Causes.—The usual and most universal cause of this fever is exposure to cold, the morbid effects of which are greatly promoted by its union with moisture, and taking place in a debilitated state of the constitution, however previously induced, whether by preceding disease, by great fatigue, long fasting, by intemperance, errors in diet, great sensuality, too close application to study, by an indulgence in anxiety and grief, or by a want of natural rest or sleep. Where a proper attention to cleanliness and a free ventilation has been paid, this fever ought not, I think, to be considered as being likely to prove contagious; but, under a neglect of these, the atmosphere surrounding the patient may be so deteriorated, particu-

larly in its last stage, that it may be extended to the attendants of those who casually visit the sick as friends.

The heat greatly abating, the skin becoming moist and soft, the pulse moderate and regular, the senses clear and distinct, and the urine turbid, and at length depositing flaky crystals, or a sediment like fine brick dust, are to be regarded as very favourable symptoms, and shew that the disease is about to go off, and the patient to be restored in due time to health; but stupor, violent delirium, great anxiety, extreme debility, irregularity in the pulse, picking at the bed clothes, involuntary evacuations by stool and urine, convulsive twitchings, and hiccups, denote that the termination will be fatal.

Treatment and Regimen.—In conducting the treatment of the common continued fever judiciously, we should be regulated by the symptoms which present themselves at the period that advice is applied for. At the commencement of it, we should adopt the plan which has already been pointed out under the head of inflammatory fever; but the utmost caution must, however, be employed in the use of those means which greatly lower the tone of the system, especially bleeding; so that sufficient strength may be left to combat the succeeding stage, in which the treatment must accord with what is appropriate for typhous.

When the common continued fever has attacked a person of a full plethoric habit of body, and there is great flushing of the face with much heat, redness of the eyes, a full, hard, and obstructed pulse, with a severe pain in the head throbbing in the temples or delirium, it will certainly be advisable to draw off eight or ten ounces of blood from the arm, if the patient is an adult, and the surgeon should make the orifice in the vein of a sufficient size to allow a free stream. The operation should be resorted to as soon after the disease has become manifest as possible, but ought not to be repeated unless the violence of the symptoms is not properly reduced by the first bleeding, or some fresh inflammatory affection, such as of the lungs, marked by a harsh, dry, and frequent cough, with acute pain in the side or chest, arises.

In those cases which are not attended with the violent symptoms above noticed, general bleeding is unnecessary; nay, it may prove an injurious remedy, and therefore ought not to be resorted to.

In milder cases, where there is considerable pain without stupor or delirium, it will probably be sufficient to substitute the application of a few leeches to the temples, encouraging the discharge of blood from the orifices, by bathing them from time to time with a linen rag, or sponge, dipped in warm water.

The stomach is affected in most instances of this and other fevers with nausea, and perhaps with vomiting, evidently pointing out the necessity of early administering an emetic to carry off the offending matter, (see Emetics, P. 1, 4, or 5,) the full effect of which may be assisted by the patient drinking two or three basins full of chamomile tea.

Costiveness is also apt to prevail at the commencement of this fever, and indeed throughout its whole course. In the first stage, the feculent contents of the bowels should be removed by some purgative, (see this Class, P. 1, 3, or 4,) and in the further course of the disease, a stool should be obtained every day, which, if not voided naturally, must be procured by some gentle laxative, (see P. 6, or 11. in this Class,) occasionally assisted by an aperient clyster, as mentioned under the same head.

To restore the circulation to the surface of the body, and which, from an exposure to cold, had been determined internally, we should administer every three or four hours some medicine that will promote a gentle perspiration. The saline mixture, or a solution of the acetate of ammonia, conjoined with any of the preparations of antimony (see P. 1, 6, or 7, Class of Diaphoretics) will be proper; and to increase their efficacy we should direct the patient to drink frequently of some tepid diluting liquor, such as thin gruel or barley water. Towards evening it may be advisable to put the feet into warm water for about ten minutes or so, particularly if the skin is very dry, and the head occupied by much pain.

Where severe pains in the head are accompanied with great stupor or delirium, it will be necessary to apply a blister of some size in the immediate neighbourhood of the part affected. In the former instance, we may also recommend linen cloths wetted in vinegar, and cold water to be put on the forehead and temples, should any objections be raised to shaving the head and laying them more generally over the whole scalp and instructions should be given to the nurse, or other attendants, that they may be re-wetted whenever they become dry, and be fresh applied.

Where there is oppression at the chest, with soreness and coughing, besides applying a blister over the part, some pectoral medicine may be taken occasionally. See the Class of Expectorants, P. 1, 3, 4, or 5.

If a purging arises in the course of the fever, and is not likely to prove critical, it should be checked by astringents. See this Class, P. 5, or 6.

Should the thirst be very great, and the heat of the body intense, medicines of a refrigerating nature may be employed with advantage. For this purpose the nitrate of potash dissolved in the saline mixture (see P. 4, Class of Antiphlogistics) may be prescribed. With the same view, we may call into aid a free use of the vegetable acids, such as those of lemons, oranges, currants, mulberries, and tamarinds, which may be mixed in whatever the patient takes for common drink. If a desire is expressed for cold water, this may be safely granted; for it will not only assuage thirst, and moderate the febrile heat, but sometimes carry off the fever entirely, by exciting a gentle moisture to break out over the whole surface of the body.

To assist in moderating the morbid excess of heat, we may direct the face, chest, and extremities to be frequently sponged over with

vinegar and water, either perfectly cold, or made somewhat tepid. The bed of the sick ought at the same time to be only lightly covered with clothes, and the chamber kept cool by a free admission of fresh air into it, taking due care at the same time that his person is not exposed to any current thereof.

In this and other fevers, the sleep is often much interrupted, and this is more particularly the case where the symptoms run high. Opium cannot, however, be administered under such circumstances; but we may make trial of about a drachm of the compound spirit of æther in an ounce of camphor julep, mixed with a drachm of the syrup of poppies, which may be given in a draught towards the decline of the evening, directing the patient to be kept at the same time as quiet as possible, and free from the stimulus of light. Towards the close of the fever, where weakness and irritability are the prominent features in the disease, from thirty to forty drops of the tincture of opium, combined with an ounce of camphor mixture, and about twenty drops of the solution of tartarized antimony, will be likely to procure rest.

At an early stage of this fever, the diet should be confined to preparations of barley, arrow root, sago, and roasted apples, &c.; but towards the middle stage, it may be changed to beef tea, veal broth, or chicken broth, and these may be made more nutritive, by having a little bread finely rasped put into them, or a small proportion of oatmeal may be added. No wine or any fermented liquors should be given at this period of the disease.

It has been mentioned that this species of fever, although partaking somewhat of an inflammatory nature in its first and middle stages, is apt, towards its termination, to degenerate into the milder species of typhous; it therefore will be necessary, when the disease has advanced to this period, and manifests symptoms of such a nature, to allow a more generous diet, with a little wine, either diluted with water, or mixed with sago, arrow-root, or other articles used for food.

In this stage of the disease, we must also resort to the medicines and remedies recommended under the head of mild typhous, and which it is unnecessary for me here to recapitulate.

OF THE YELLOW FEVER.

This species of fever, in my opinion, very closely resembles the malignant or virulent typhous already described, and the only difference between them is, that in the former the skin is not unfrequently tinged of a yellow hue, and there is a vomiting of dark brown matter, supposed by some to consist of putrid bile, by others of a mixture of blood with bile; or of the interior coat of the stomach dissolved in the progress of inflammation. There are some again who consider the black matter which is thrown off by vomiting, as consisting of a number of flaky particles, resembling the grounds of coffee, and intermixed with dark coloured inspissated mucus.

This vomiting of dark or black matter is characteristic of the disease, but the yellow tinge of countenance is not so ; for although a symptom pretty generally met with, yet it is not universally so.

Symptoms.—An attack of the disease known under the name of the Yellow Fever is not unusually preceded by a defect of appetite, perverted taste in the mouth, heat in the stomach, flatulency, giddiness or pain in the head, dejection of spirits, languor, debility, and costiveness.

After a lapse of 24 or 36 hours the patient is seized with lassitude and weariness, frequent rigors or chilliness, succeeded by flushings in the face, redness of the eyes, with pains in the eye-balls and forehead, extending in some cases backwards to the neck, great faintness, prostration of strength, and frequent sighing, with a tendency to stupor. There is excessive thirst, the tongue is coated with a tenacious fur of a dark brown colour, the spittle is viscid, the skin hot and dry, the pulse quick, small, and hard, the urine is high coloured and scanty in quantity, but there is an unusual secretion of bile, which, getting into the stomach by regurgitation from the gall bladder, is discharged by frequent vomiting.

In the further progress of the disease, the eyes and face, in many instances, become of a deep yellow colour, which soon extends also to the chest the stomach is highly irritable, and almost incessantly throws up a dark brown or black matter, whilst, at the same time, the bowels are very costive ; the urine is still high coloured, somewhat turbid and small in quantity, and delirium of a peculiar nature arises.

It seldom happens that any perceptible remission occurs during this first stage of the fever, which usually lasts from 36 to 48 hours. At the end of this period there is generally some abatement of the symptoms ; but a fresh paroxysm, under a highly aggravated form, soon again takes place, and excites alarm both to the patient and his friends.

The fever proceeding in its course, with imperfect remissions and fresh paroxysms every twenty-four hours for several days, great debility becomes manifest, and symptoms indicating approaching putridity make their appearance. The tongue now becomes dry and black, the teeth and whole of the mouth are coated with a very dark brown fur, the breath is highly offensive, the whole body is, in many cases, of a livid yellow colour, dark and fetid stools are voided, discharges of blood take place from the nostrils, mouth, and ears, hiccups ensue, the pulse intermits and sinks, and at last respiration wholly ceases.

Having enumerated the symptoms which usually present themselves in the yellow fever, and the order in which they succeed each other, it is proper I should mention that various writers on the disease have taken notice of some irregularities both as to the manner in which it makes its attack, and its further progress and duration. By some practitioners it is reported to have terminated fatally in sixty or ninety hours, and by others it has been observed

to run on for many days before it ceased wholly, or else destroyed life.

Causes.— Those which predispose a person to an attack of the yellow fever are intemperance, a full plethoric habit of body, intense hot and sult y weather, and exposure to night air or cold. Europeans were very apt to be attacked with this disorder soon after their arrival in the West Indies, when it was prevalent there.

With respect to the exciting cause or causes, there has been great diversity of opinions ; and it has also been a subject of controversy where the disease originated, whether it first broke out in the West Indies, and was conveyed from thence to America, or was imported from the latter to the former, through the medium of trading vessels, the seamen of which communicated the fever to those with whom they had any communication. The point has not to the present day been satisfactorily cleared up or decided. In my Modern Practice of Physic, I have stated that it was probable the yellow fever broke out about the same time both in America and the West Indies, owing to an extensive and peculiarly deranged state of the atmosphere in both at one period ; but since the publication of the last edition of this work, Dr. Hosack, who is Professor of the Institutes and Practice of Medicine in the University of New-York, has kindly transmitted to me his discourse on the medical police of that city, in which he has detailed and brought forward such a body of evidence, as clearly to prove, in my opinion, that the yellow fever arose in America from imported contagion, and had not a domestic origin.

The exhalations, arising from vegetable matter under a state of decomposition or marsh effluvia, as they are termed by professional men, may, I think, under a deranged state of the atmosphere, from great preceding heat and drought, have given rise to this species of fever in the West Indies, particularly in persons habituated to a cold or temperate climate. It is also an unsettled point whether or not it is of a contagious nature. The opinion I hold, and ever did entertain, is, that it is communicable from one person to another, or is contagious in an impure or deteriorated atmosphere, where many sick are lodged together in one room, and there is at the same time a neglect of cleanliness and proper ventilation ; but I think where there is a free admission of pure fresh air, and a proper attention is paid to strict cleanliness in every respect, its contagious properties may be so diluted as to become harmless, and incapable of being communicated to another person from the one labouring under it.

As by removing a patient labouring under the yellow fever to a healthy situation, keeping him very clean at the same time by a frequent change of his body linen, as well as that of his bed, and taking care that his apartment is freely ventilated by the regular admission of pure air, those who are inmated with him, rarely, if ever, become infected. It has been thought by many physicians that this fever is not of a contagious nature. Probably it may not be

so in its first stage; but I think that whatever may be the original nature of the yellow fever, as well as of some others, if permitted to run a protracted course, and there is at the same time a neglect of due cleanliness and free ventilation, it may, and does then become very contagious.

The yellow fever differs from typhus in the following circumstances, viz. It usually prevails only during or immediately after very hot seasons, in which typhus is soon extinguished, and it is in its turn completely annihilated upon the taking place of cold weather in which typhus is most prevalent, if accompanied by humidity in the atmosphere. It attacks most readily and violently the young and robust, over whom typhus is allowed to have the least influence. It begins with much greater exertions of the living power than typhus, is attended with a few symptoms of a different nature, and it now and then changes into a regular remittent, and sometimes even into an intermittent, form, which true typhus is never observed to do. It differs from the plague, in that it prevails only in those countries and seasons in which the heat is, or has recently been, so great as to destroy, or stop the progress of, the plague. In the intertropical climates, so favourable to the existence and production of the yellow fever, the plague has never yet made its appearance. Carbuncles and buboes, so constantly the attendants on the plague, are rarely, if ever, to be met with in the yellow fever. One of the essential characters of this fever is a violent febrile paroxysm; whilst the best writers on the plague have mentioned, that in many instances of this disease, it has been ushered in without any of the usual symptoms of fever. See the Plague.

Our opinion, as to the event of the yellow fever, must be drawn from a careful consideration of the age and habit of the patient, the mode of attack, and the nature of the symptoms. The danger will be in proportion to the full and robust habit of the patient. Extreme debility, severe and incessant vomiting of dark or black matter, the sudden oppression of all the functions, tremors of the body when moved, dilatation of the pupils of the eyes, with great stupor, pensive sadness in the countenance, a weak irregular pulse, highly offensive breath, black and fetid discharges by urine and stools, and the appearance of purple or livid spots dispersed over the body, all denote that the life of the patient is likely to fall a sacrifice to the disease ere long. On the contrary, a considerable diminution of the affection of the head, a lively appearance of the eyes, free perspiration, a return of natural rest, the pulse becoming fuller and more regular, a gentle purging arising, or the urine becoming very turbid and depositing a copious sediment, and the stomach at the same time perfectly tranquillized, are to be considered in a very favourable light. The disease is apt, however, to exhibit deceitful appearances, and seems at times to be going off, when a sudden change takes place for the worse and carries off the patient; nay, some sink under it, who apparently are in a state of convalescence.

Treatment and Regimen.—Various opinions exist with respect to the propriety of drawing off blood from the system in this fever; but my reading and observation convince me, that if it has attacked a person of a full plethoric habit, and the pulse is hard, full, and strong, the eyes red, staring, and watery, the skin dry and parched, with flushing heats in the face, and there is either acute pain in the head, or stupor, (these symptoms evidently demonstrating an inflammatory tendency,) bleeding from the arm to a proper extent, that is, in proportion to the youth and habit of the patient, as well as the violence of the symptoms, will be both advisable and serviceable, provided it is done at a very early period of the disease, say during the first twenty-four, or at farthest, thirty-six hours. After this period, the operation ought not, I think, to be attempted.

At the commencement of the yellow fever, it is not unusual to find the patient complain of great nausea, attended very often by frequent vomiting, and which it is very difficult to allay. An emetic in such cases would be improper, and, instead of it, we should exert every endeavour to calm and allay the irritation of the stomach, by applying flannel cloths wrung out in a warm decoction of bruised poppy heads, with the addition of a small proportion of camphorated spirits over the upper part of the belly, directing at the same time a saline draught to be taken every hour or so, in a state of effervescence. For this purpose, dissolve a scruple, or half a drachm of the subcarbonate of potash with a bit of white sugar, in an ounce and a half of mint or common water, then add about two tea-spoonsful of lemon juice, stir them well together,—and let the patient drink the whole during the ebullition which takes place. If the vomiting is very frequent and severe, about ten or twelve drops of the tincture of opium may be added to each draught. Should this unpleasant symptom resist these means, the early application of a blister over the region of the stomach, may possibly have the desired effect.

As soon as the stomach is so much tranquillized as to be capable of retaining medicine, it will be highly necessary to clear the bowels of all acrid and offending matters, by administering some purgative in as small a bulk as possible; for which purpose we may give about four or five grains of calomel, with ten of the powder of jalap, or the extract of bitter purging apple, (colocynthis) made up into three pills, with a little common syrup. If necessary, a laxative clyster may be administered some hours afterwards.

The good effects resulting from cold affusion in this fever, as well as in the other species of typhus, have been fully established on the authorities of several physicians of eminence, who have had numerous cases of the disease under their care and superintendance, and, therefore, it ought to be employed at a very early period. Cold water, when applied externally, where the patient is distressed with the sensation of burning heat, gene-

rally affords very great relief to his feelings. It is only, however, when the temperature of the skin is raised considerably above the natural standard, that cold water should be applied externally to the body by affusion, or even by wetting it with a sponge dipped in water and vinegar; and the period of its application and the frequency of its repetition, must be regulated by the feelings of the patient; for should he become chilled by the application, much injury might ensue.

For the purpose of avoiding fatigue to the patient, which the preparation for cold affusion is likely to induce, it has been recommended that he should be covered in his bed with a single sheet wetted or wrung out in cold water, as this will reduce the heat of his body very considerably by the evaporation which takes place.

Where neither of these modes of applying cold water can be employed with convenience or safety to the patient, we ought to be content to substitute the wetting of the hands, face, and other parts of the body with a sponge dipped in vinegar and tepid water.

Some benefit may possibly be derived also from cold water taken inwardly for drink, as the heat of the body, thirst, and severity of the fever, have, in many cases, been moderated by frequent and small draughts of it.

Mercury is a remedy which is reported by many physicians who have practised in the West Indies and America, to have been employed by them with great benefit at an early stage of the yellow fever; and they have regulated its use so as to affect the mouth, and excite some degree of salivation. In some cases, calomel has been given with this view to an almost incredible extent before any spitting took place, even when assisted by rubbing in strong mercurial ointment at the same time. From the well-established efficacy of mercury in affections of the liver, it may probably be a proper and valuable remedy in the early stage of the yellow fever; but when the distressing and dangerous symptoms of the second stage have made their appearance, mercury would, I think, greatly aggravate them, and thereby destroy life the quicker.

If we determine on having recourse to mercury at the onset, or very early in the disease, we may give it combined with opium, by forming from two to four grains of calomel with the fourth of a grain of opium, and a sufficient quantity of honey or thick syrup into a pill, which is to be taken immediately, repeating the dose every four or six hours. To assist the effect of the remedy in producing, as quickly as possible, a slight degree of salivation, we may at the same time direct half a drachm, or a whole drachm, of strong mercurial ointment to be rubbed into the thighs, hams, legs, and arms, every six hours; but as soon as a gentle spitting has come on, the use of mercury, in any shape, must be discontinued.

Some physicians have considered a use of mercury in this fever, so as to produce any degree of salivation, as extremely equivocal

in its operation, and they think that its good effects have been much exaggerated. They are, however, of opinion, that it may and does prove of essential benefit as a purgative; and, therefore, that it may be given to clear the bowels of feculent matter, as the occasion shall require, throughout the whole course of the disease. These sentiments coincide with my own.

In those cases where violent delirium or very great stupor prevails, the application of a blister in the immediate vicinity of the head may be advisable. Where there is great coldness of the extremities, stimulating cataplasms should be applied to the soles of the feet. See Class of Stimulants, P. 13.

From the very irritable state of the stomach in this species of fever, we should never employ antimonial medicines with the view of exciting perspiration, but we may give other diaphoretics, (see this Class, P. 10,) particularly the saline mixture combined with camphor.

It is rarely, if ever, advisable at the commencement of the yellow fever to make use of opium to procure sleep, particularly where delirium prevails; but towards the decline of the disease, when perfect remissions are observable, it will be beneficial. (See P. 5 or 6, Class of Anodynes.) It will also be useful when convulsions arise.

The good effects of mineral acids in every species of typhous fever point out the propriety of administering them in this disease, and I would recommend them, but more particularly the muriatic, not only to be given at an advanced stage of the fever, where a tendency to putrefaction is much to be apprehended, but also at a very early period, with the view of preventing, if possible, the natural disposition thereto. From six to eight drops of the acid may be given every three hours in an infusion of orange peel or cascarilla bark. See Class of Tonics, P. 4.

If we are fortunate enough to obtain perfect remissions, we should immediately administer the Peruvian bark in substance, if the stomach will bear it; but if not, we must be content to substitute some lighter preparation of it, such as the infusion or decoction, persevering in the use of the medicine throughout the whole stage of convalescence, which is usually long and tedious. A few drops of the muriatic or diluted sulphuric acid will much increase the efficacy of the bark; and should any uneasiness of the stomach or bowels arise, or purging be excited, we may add six or eight drops of the tincture of opium to each dose of the bark and acid, or we may substitute the sulphate of quinine. See Intermittents.

But should the fever resist our best endeavours to subdue it, and no perfect remissions be observed; but, on the contrary, run its course with violence and great exhaustion of strength, thereby threatening approaching, if not already apparent, symptoms of putrescency, the aid of the most powerful antiseptics must be called in, as advised under the head of malignant fever; and in this

class the mineral acids stand pre-eminent. On some occasions a use of spirituous baths has been added.

Throughout the whole course of the disease the strictest attention must be paid to cleanliness in every respect: the linen of the bed, as also that of the body, should be changed frequently; whatever is voided by urine or stool should be immediately removed, and the chamber of the sick be kept perfectly cool, and properly ventilated by a free admission of fresh air into it. It may also be sprinkled now and then with a little warm vinegar. To assist in correcting any fetid smell, we may make use of the gaseous fumes arising from the muriatic or nitric acids, as mentioned under the head of the Means for Destroying Contagion.

At an early period of the yellow fever, the patient should be confined to diet of a mild nature, consisting of preparations of arrow root, sago, barley, &c.; but as the disease advances, his strength must be properly supported by animal broths made of lean meat, such as beef tea, veal or chicken broths, somewhat thickened by an addition of crumbled bread, oatmeal, or barley. Where great debility and exhaustion become evident, a moderate use of wine may be allowed; but it will be best to give it in a diluted state, as in the form of negus, which, as containing a vegetable acid, will add to its good effect.

Such are the means which it will be advisable to adopt throughout every stage of the yellow fever. For those which it may be proper to employ for the prevention of the contagion being communicated to others, as also for hindering the disease from attacking new settlers in the West Indies, or other warm climates where the disease is apt to prevail, I beg leave to refer the reader to the rules for the preservation of health, &c., prefixed to this work.

OF INTERMITTENTS OR AGUES.

These fevers consist of attacks or paroxysms, in which there are three stages, viz. a cold, hot, and a sweating stage, succeeded, after a time, by a perfect intermission from febrile symptoms.

Intermittent fevers have been divided into the quotidian, the tertian, and the quartan. In the quotidian, the attack takes place daily, there being an interval of freedom from fever of twenty-four hours. In the tertian, the paroxysm comes on every other day, having an interval of forty-eight hours; and in the quartan, the fit occurs on the first and fourth days; the two intervening ones being free, and, therefore, having an interval of seventy-two hours. Other varieties of intermittent fever are enumerated by authors; but as they all arise from the same causes, and resemble each other, both in the train of symptoms and indications of cure, it is unnecessary to particularize them here.

It is termed vernal ague when it attacks in the spring of the year, and autumnal when it occurs in the autumn.

Symptoms.—The cold fit of an intermittent is ushered in with

languor, and a sense of debility, listlessness, yawning, and stretching, together with an aversion to motion. The face and extremities become pale, the skin of the whole body appears constricted as if cold had been applied to it, the secretions and excretions are diminished, the pulse is small, frequent, and irregular, the respiration short and anxious, and rigors succeed which terminate in an universal and convulsive shaking.

These symptoms, after an hour or two, are succeeded by a degree of heat, at first irregularly by transient flushes, but which soon becomes oppressive and burning, rising much above the natural standard. The sensibility, which in the cold stage was diminished, now becomes preternaturally acute; pains arise in the head with a throbbing in the temples, the tongue is white, there is considerable thirst, the urine is high coloured, and the pulse quick, strong, and hard. Such are the characteristics of the hot stage.

After a time the heat abates, the pulse is diminished in frequency, and becomes free and full, respiration is easy and natural, the urine deposits a sediment, a gentle moisture is observed to break out upon the face and neck, which extending, soon becomes an universal and equable perspiration, termed the sweating stage.

The whole paroxysm generally occupies from six to eight hours, and after a specific interval, it again returns, commencing as has just been described.

Causes.—Those which predispose to attacks of intermittents, are debility, however induced, whether by grief, anxiety, great fatigue, long want of sleep, a poor watery diet, an insufficiency of food, or preceding disease. Probably the suppression of accustomed evacuations, the repulsion of eruptions, and the application of cold united with moisture in whatever way applied to the body, may have at times some influence as predisposing causes; but we are to consider the effluvia or vapours arising from stagnant water or marshy ground, impregnated with vegetable matter in a state of putrefactive decomposition, as the most usual exciting cause of this species of fever. The term of malaria (borrowed from the Italians) has of late been substituted by some physicians instead of that of marsh miasma, for these exhalations or effluvia.

When the attacks are of short duration; when they recur at regular periods, and leave the interval perfectly free, the disease, at least in our climate, is unattended with danger, although in warm climates it is apt to degenerate into a fever of the remittent or continued type. From the following circumstances we may draw an unfavourable opinion. The paroxysms being of long continuance, violent, and accompanied with great anxiety and delirium; the disease being combined with others, or by a protracted state of the original intermittent, other disorders being induced, such as dysentery, enlargement of the spleen and liver, ultimately inducing

jaundice and dropsy. Convulsions occurring during the paroxysms, preceded by an unusual propensity to sleep, giddiness, depraved sense, great prostration of strength, fetid excretions, a dry black tongue, obstinate costiveness, or hiccup with vomiting and pain on pressure upon the belly, are also to be considered as unfavourable symptoms.

A Quartan Ague is more difficult to cure than a quotidian or tertian. The first frequently extends from autumn to spring. An autumnal ague is removed with greater difficulty than a vernal one. Quotidians and double tertians (that is, where the disease returns every day, the paroxysms being unequal, but similar every other day), especially when they anticipate the proper hour of their return, are apt to change into continued fevers, and are then attended with some danger.

Treatment and Regimen.—In treating every species of intermittent fever properly, we should adopt the remedies we employ to the periods of the disease. During the cold stage, we must endeavour to induce the hot, and during the latter, our object ought to be to promote a perspiration. These indications are to be effected by artificial warmth; by tepid diluent liquors, such as thin gruel, a decoction of barley, or common tea; by applying bottles filled with warm water to the feet, or immersing them in hot water; and by administering cordial diaphoretic medicines and opiates. See Prescriptions 4, 6, or 7. Class of Diaphoretics.

To prevent the cold fit of an Intermittent is often equivalent to the obviating a renewal of the paroxysm altogether; and therefore putting the patient into a vapour or warm bath a quarter of an hour before the usual period of its coming on, and keeping him in it for about thirty-five minutes, or until the period of the cold stage has elapsed, will in some cases be found to effect a complete cure when even the Peruvian bark in large doses had been given without effect.

Opium has been found very effectual in Intermittent Fevers, when given either on the approach of the cold fit, or as soon as the hot fit is formed. We may, therefore, give from twelve to twenty drops of the tincture of opium in a little peppermint water at either of these periods, repeating the dose in half an hour's time, if no amendment has then taken place. This medicine relieves the head-ache and other febrile symptoms, and promotes sweating, particularly when assisted by moderate draughts of warm or tepid liquors, and diaphoretics, such as the common saline medicine, camphor mixture, or antimonials, various forms of which are given under the head of this class of remedies.

In the course of the hot fit, if the head becomes much affected, and either delirium, incoherency of expression, or uncommon disposition to sleep, is perceived, it may be advisable to apply a blister between the shoulders, or even over the head, having had it first shaven. In cases of a severe attack, we may also apply cataplasms of mustard (see Prescription 13, in Class of Stimulants)

to the soles of the feet, taking care to remove them soon after the patient becomes sensible of their effect.

Should there be a fulness of blood in the vessels of the head, or delirium arise, opiates are to be discontinued, and cupping from the temples, or the application of four or six leeches to be substituted.

During the continuance of the hot stage, it sometimes happens that the patient is distressed, either by sickness at the stomach, or a vomiting of bilious matter; and in such cases it may be advisable to wash it out by one or two basins full of chamomile tea. When the tranquillity of this organ is restored we may also evacuate the contents of the intestinal tube by some mild purgative. See the Class of Purgatives, P. 1, 3, or 4.

If much coughing arises, it is to be appeased by any of the medicines prescribed under the head of Expectorants (See this Class), and where this is accompanied with some difficulty of breathing or a pain in the side, a blister may be applied over the part. If there is evidently an inflammatory tendency or disposition, a few grains of the nitrate of potash (say from five to ten) may be given occasionally. See Class of Antiphlogistics, P. 4, or 5.

Such are the means to be adopted during the paroxysms of intermittent fevers.

In the intermissions or freedom from fits, our attention must be directed to the excitement of a new action in the system, by certain remedies administered at the commencement, or immediately before the accession of the cold fit; and, to prevent a return of the paroxysm, the body must be strengthened.

The first indication is often answered by giving an emetic immediately before the coming on of the cold stage: this may consist of about fifteen grains of ipecacuanha in powder, and one grain of tartarized antimony, mixed in a little mint or common water. Æther has also been observed, in some few instances, to produce the same effect of arresting the progress of a paroxysm, and may therefore be tried in the dose of a drachm or sixty drops, administered on its approach. A like effect results from giving the tincture of opium, as has already been observed.

The second indication of invigorating the body, and thereby preventing a return of the attacks, is to be answered by allowing the patient a generous nutritive diet and a moderate use of wine; by his taking regular exercise, either on foot, horseback, or in a carriage, as his circumstances will admit, and his state of body render its use practicable; and by a course of tonics, various combinations of which medicines are prescribed under this class. See Tonics.

We may, however, begin by administering the yellow Peruvian bark in powder, to the extent of two scruples or one drachm for a dose, every two hours, which plan is to be continued during the absence of fever or throughout the intermissions. It perhaps will add to the efficacy of the medicine, if an addition of about four grains of aromatic powder, or the gratings of nutmeg, be made to each dose of the bark.

It may be proper to observe, and indeed should be considered as a practical rule, that patients should, during the intermissions, take as much of this bark as is sufficient for the prevention of a return of the attacks. In a quotidian, the medicine ought to be given every hour; in a tertian, every third or fourth hour; in a quartan, the first day being free from any febrile affection, the medicine need only be taken every six hours, but on the second and third, it must be administered every two or three hours.

Peruvian bark, when properly administered, seldom fails to stop the returns of the fever in a short time; but with the view of preventing a relapse, it will be necessary to continue the medicine every fifth or sixth hour, for two or three days; then thrice a day for the ensuing week; and about twice a day for another: the patient avoiding night air or a moist atmosphere, and refraining from any sort of food that is watery or apt to prove flatulent. Where there is much debility, the bark may be given in a little wine, properly diluted.

The bark is apt to occasion a purging in some constitutions; if so, four or five drops of tincture of opium may be added to each dose as long as this effect continues. On the contrary, costiveness is occasionally produced, and then it will be advisable to add three or four grains of rhubarb, omitting the latter, however, as soon as the bowels become regular.

Some stomachs will not bear the bark in substance, in which case it may be taken in decoction, or infusion, either simply (See Class of Tonics, P. 1 and 2), or conjoined with some spirituous tincture, as in P. 8 and 9. If these are also rejected, a trial may be made of the extract of bark, which may either be given in the form of pills, or be dissolved in six or seven ounces of a decoction of the bruised powder, and used as a clyster. Administering the bark in this manner will be advisable for children who cannot be prevailed upon to take it by the mouth.

The sulphate of Quinine is a medicine that will frequently succeed in putting a stop to an Intermittent fever when the Peruvian bark has failed, and may be given to adults in the dose of five grains every six hours, and to younger subjects in the like proportion. The best form to administer it is in that of a pill. In intermittents, the powder of Peruvian bark requires to be given in pretty large quantities before the disease is removed, or even before the paroxysms are rendered milder, and not unfrequently it fails entirely; but with respect to the sulphate of quinine, the patient has only to take a pill, and is spared the annoyance of swallowing a large portion of the powder of bark, which frequently so disgusts him and deranges his stomach, that the latter cannot be borne in sufficient quantity, or indeed at all. In protracted Intermittent and Remittent fevers, the sulphate of quinine will be likely to form a valuable medicine. Should the form of pill prove objectionable to the patient, the medicine may be given in a draught. See Class of Tonics, P. 27.

Other barks have been proposed as substitutes for that known under the name of the Peruvian. These are the barks of the broad leaf willow, that of Cascarilla, and the Angustura bark, and they may be given in the same dose as the Peruvian when the stomach rejects the latter. They are to be considered, however, as far less efficacious.

Many vegetable tonics besides those already mentioned have been administered in the cure of intermittents, either conjoined with the Peruvian bark or other remedies, but more particularly chalybeates. The following are the principal ones, viz. wormwood, chamomile, gentian, quassia, calumba, the blessed thistle, and lesser centaury ; prescriptions of the most of which are inserted in the class of Tonics.

The most powerful medicine next to the bark and sulphate of Quinine is the arsenical solution ; and indeed this, when judiciously administered, will frequently put a stop to the attacks of intermittent fevers, under a failure of the bark. In many fenny districts, such as those of Lincolnshire, Essex, and the like, the solution of arsenic, prepared as directed by the London College of Physicians, is much employed with decided success ; and although it may by some be considered as too powerful a medicine to be employed in domestic practice, still no danger can arise from its use if given in very small doses at first, and due attention is, at the same time, paid to its effects. We should begin with four drops, repeated about three times a day, increasing the dose gradually to about six drops ; and it will add to the efficacy of the medicine if we administer it in a decoction or infusion of the bark, adding thereto six or eight drops of the tincture of opium. See the Class of Tonics, P. 24.

Other mineral tonics besides arsenic have also been given with occasional success in intermittents, which have continued a length of time, and have either been neglected at first, or have resisted the powers of the bark, even when timely administered. The chief of these are preparations of iron, zinc, and copper, and these may be tried if the bark and sulphate of quinine fail, and the patient is averse to taking the arsenical solution. They may be given in the doses and forms combined with some vegetable bitter, as in the Class of Tonics, P. 16, 20, 21, 22, and 26.

An enlargement of the liver or spleen not unfrequently takes place, in consequence of the long continuance of an intermittent. In such visceral obstructions, a use of mercury becomes necessary, and it should be given every second night, so as just to affect the mouth slightly. One grain of the submuriate of mercury (calomel), with half a grain of opium, made into a pill, with a little aromatic confection, will answer the purpose, but the tonic medicines are to be continued notwithstanding.

It sometimes happens that a dropsical tendency, or effusion of a watery fluid, either in the cellular membrane of the lower extremities or in the cavity of the belly, accompanies such visceral ob-

structions, or it arises without them from general debility, induced by a long continuance of the disease. In such cases, we may have recourse to medicines which increase the secretion of urine, combined with those of a tonic nature. For these see the Class of Diuretics.

In the domestic treatment of agues, medicines of no real efficacy whatever, and some of them even of a disgusting nature, which are calculated to make a strong impression on the senses, such as snuffs of a candle, cobwebbs, and spiders, swallowed in a living state, have been employed with some success; as well as charms, with great affectation of mystery and ceremonious pomp.

Intermittents being very apt to recur on any improper exposure of the body to cold, damp air, or piercing winds, the patient should be particularly cautious in avoiding these as well as all other causes likely to bring on a return.

OF THE REMITTENT FEVER.

Fevers of the remittent class are such as never totally lose their febrile appearances, although their violence is for a time abated, or, in other words, in which, although evident and distinct paroxysms and remissions are perceptible, still there is no complete interval or freedom from fever, one attack appearing not entirely to go off before a fresh one ensues. In their course, they indeed so nearly resemble continued fevers that they are not to be distinguished, but by the most attentive and accurate observation. They are of a middle nature between the continued and intermittent, partaking, perhaps, more of the character of the latter than the former, from their arising from the same cause, (marsh effluvia or vapours from marshy grounds, or stagnant waters, impregnated with vegetable matter, in a state of putrefactive decomposition), their prevailing in the same districts, and at the same seasons of the year.

A remittent, although not infectious in its simple state, may, I think, become so in its course by crowding too many sick in one apartment, neglecting, at the same time, a free ventilation or admission of fresh air, and proper cleanliness, in not frequently changing both the bed and body linen, and quickly removing every excretion as soon as voided.

Symptoms.—The symptoms will vary according to the situation and constitution of the patient. They usually begin with yawning and stretching, a sensation of cold, nausea, or bilious vomiting. To these succeed thirst, pain in the head, back, and stomach, restlessness, difficulty of breathing or oppression on the chest, extreme heat over the whole body, and not unfrequently some incoherency of expression. The pulse is seldom full, but frequent and hard, the tongue is white and moist, with a yellowness very perceptible in the whites of the eyes, and occasionally over the whole body.

After a time the symptoms abate considerably, and a gentle

moisture is diffused over the body, but there is no complete interval, or perfect freedom from fever, and perhaps in a few hours it returns with the same violence as before, or under an aggravated form. After the continuance of a certain number of hours, varying in different subjects, this second fit wastes its force and again remits; to which a third accession of the usual symptoms succeeds, and in this manner the disease proceeds, with fresh paroxysms and remissions, until the fever ceases wholly, or is changed into the intermittent or continued form.

If the disorder gains strength, or is very violent, the remission is scarcely obvious, and is immediately followed by another paroxysm, wherein all the symptoms are much aggravated; the tongue becomes dry and stiff, the mouth, teeth, and inside of the lips are incrusted with a dark brown or black fur, the stools pass off involuntarily and are highly offensive, the pulse becomes quick, small, and irregular, and picking at the bed with startings of the tendons and great incoherency ensue, which usually close the scene.

Remittent fevers have been considered as consisting of two species, viz. the inflammatory and putrid. The first is characterized by the symptoms of excessive heat, thirst, and pain, all running very high, and accompanied with a dry skin, and a strong, full, and hard pulse. The last is marked by the symptoms of nausea, vomiting, oppression, extreme weakness, and dejection of spirits, with a weak pulse, and discolouration of the skin, all plainly shewing the putrefactive tendency.

According to the season of the year, as well as the situation and constitution of the patient, will the symptoms that attend on remittent fevers vary; for those which denote an inflammatory disposition sometimes predominate; at others, those which shew a considerable redundancy of secreted bile, and, now and then, those pointing out a tendency to mild typhus, or its more malignant and putrid type.

In forming an opinion as to the termination of the disease, this may be drawn with tolerable accuracy from the presence or absence of those circumstances which indicate danger in that particular form of fever which the disease assumes, and which are clearly pointed out under the heads of both species of typhus, inflammatory fever, and simple continued fever, this last being of a mixed nature, or a combination of the two former. In warm climates, remittent fevers very frequently occur, and often prove fatal. The mouth, teeth, and inside of the lips being covered with a black crust; the tongue becoming dry and stiff, so that the patient's voice can hardly be heard; the stools having a cadaverous smell, and passing off involuntarily; the pulse quick, small, and irregular; a cold sweat diffused over the whole body; the face becoming convulsed, the patient employed in feeling and picking at the bed-clothes, with catchings or twitchings of the tendons, are to be considered as very dangerous symptoms, and denoting a fatal termination. The more obscure and shorter the remissions are, the greater will be the risk.

The nearer the fever approaches to the intermittent type, and the milder the attacks, the more likely to be favourable will be the termination.

Treatment and Regimen.—The first must be regulated by, and entirely depend upon, the nature of the attendant fever, or other cause which prevents there being a distinct and perfect intermission from the febrile symptoms, and gives to the disease a remitting form or type.

Should it have an inflammatory tendency, we must resort to the means and remedies which have been pointed out under the head of inflammatory fever. Should it assume the characters of either the mild typhus, or its more malignant or putrid disposition, we must then adopt the mode of treatment advised under these respective heads.

On the first coming on of the disease, should the pulse be full and hard, the heat intense, and the breathing difficult, the patient ought to be bled, drawing off about ten or twelve ounces, if an adult; but, on the contrary, should the person feel low, feeble, and dejected, with anxiety, rigors, and a weak soft pulse, &c. bleeding would, by no means, be advisable.

At the commencement of remittent fever there is frequently a considerable degree of nausea, or sickness; if so it will be advisable to carry off the exciting contents of the stomach, by giving a gentle emetic. See P. 1, 4, or 5, Class of Emetics. Where much vomiting of bilious matter spontaneously arises, and the stomach appears in an irritable state, we had better wash it out with one or two basins full of chamomile tea than administer an emetic, and then give the saline draught in a state of effervescence. After this operation, if required, we may empty the rest of the alimentary tube, by giving some aperient or gentle purgative medicine. See P. 1, 3, or 4, in this Class.

These evacuations, both upwards and downwards, having been obtained, our next object should be to promote a moderate perspiration over the whole surface of the body, in order to bring the fever sooner to a crisis, or at least to regular intermissions. With this view, we may advise saline draughts, combined with tartarized antimony, and the nitrate of potash, or we may prescribe the camphor mixture united with a solution of the acetate of ammonia, and some antimonial preparation. (See P. 6, 7, 8, or 9. Class of Diaphoretics.) To assist these medicines in producing the desired effect, the patient should drink plentifully of tepid diluting liquors, such as barley-water, very thin gruel, lemonade, or even cold water, which will sometimes elicit moderate sweating when other means have failed to do so.

Should the head be much affected, and delirium arise, it may become necessary to apply a blister between the shoulders, or to the shaven scalp; but where there is only pain in the head with considerable heat, it will be best to substitute the constant application of linen cloths, wetted from time to time with vinegar and

cold water, all across the forehead, or even over the whole head, having had it previously shaved.

During the height of the paroxysm, when the heat runs high and the head-ache is severe, or there is much delirium, very good effects often result from cold affusion, or throwing cold water over the patient's body. In some instances where this practice has been adopted, the further progress of the disease has been arrested, or an early termination of the paroxysm has ensued; but at any rate the result will be, that from a remittent, it will quicker assume an intermittent type, which is highly desirable.

At a more advanced period of the fever, where great weakness has arisen, instead of employing affusion or immersion, it will be advisable only to sponge the body over now and then throughout the duration of the violent heat with vinegar and water, made somewhat tepid.

As long as the severity of the paroxysms lasts, we are to continue the use of the diaphoretic medicines in small but frequently repeated doses; from time to time to wipe different parts of the body with a sponge wetted with tepid water and vinegar, where the more universal application of cold affusion or immersion is inadmissible; and, as the occasion may require, to clear the bowels of feculent matter by some gentle purgative, if sufficient stools do not take place naturally. By pursuing this plan of treatment, the remission will in all probability be greatly expedited.

As soon as this takes place, the bark is to be given in doses of from one to two drachms of the powder; and this ought to be repeated every second or third hour at farthest, lest the opportunity should be lost of administering a sufficient quantity of medicine during the abatement of the febrile symptoms, as the paroxysms about this period, when the bark is admissible, are apt to become double, and run into the continued form. If the bark in substance cannot be retained on the patient's stomach, we must substitute either its extract or some lighter preparation, such as an infusion or decoction, (see P. 1 and 2. Class of Tonics) and we may add fifteen or twenty drops of diluted sulphuric acid to each dose. Should any of the preparations of the bark excite purging, six or eight drops of the tincture of opium are to be added to each dose.

As in tropical and other warm climates this fever is apt to assume a dangerous and continued form, we ought to administer the bark even on any remission, however short or imperfect; but in northern climates, we may wait for a complete and perfect remission. One ounce and a half of the bark will frequently put a stop to a remittent fever, if judiciously given; but it is nevertheless to be continued daily afterwards, though in smaller doses (say a drachm) three or four times a day, until the patient has recovered his strength.

Even when this medicine fails in immediately arresting the progress of the fever, it invigorates the system, prevents dangerous symptoms from taking place, and brings on the critical period much sooner, and with less distress, than where the disease is left to

itself. When the Peruvian bark fails, or the patient's stomach loathes and rejects it, we may substitute the sulphate of Quinine, in the dose and forms mentioned under the head of Intermittents.

The solution of arsenic, which has already been noticed as being a powerful and efficacious medicine in obstinate intermittents, has also been given in some remittents of a tedious and violent nature. Should the bark of itself or the sulphate of Quinine fail in producing the desired effect, it may be advisable to make trial of the solution of arsenic, giving from six to eight drops in about one ounce and a half of either a decoction or infusion of the bark.

Throughout the whole course of the disease the patient's strength is to be supported by food of a light but nutritive nature, although during the violence of the paroxysms he should have nothing given to him but thin gruel, and the different preparations of barley, sago, arrow root, &c. During the remissions, a little wine may be added to these, if his strength is much reduced, and his head not much affected or painful. To allay his thirst, he should be presented from time to time with some cooling acidulated liquor, such as barley water with lemon juice, an infusion of preserved tamarinds, lemonade, &c.; or he may drink cold water if he prefers it. A strict attention is to be paid not only to regimen but to cleanliness, and the free admission of pure air. The covering of the bed should be light, and the linen of this as well as of the body be changed frequently. All noise, and the intrusion of visitors or unnecessary attendants, are to be prohibited; the chamber should be somewhat darkened, to prevent any strong glare of light from affecting the eyes; it should have a free admission of pure air into it, by leaving a window sufficiently open, and it ought to be sprinkled from time to time with warm vinegar, being very attentive at the same time to remove immediately whatever is voided by stool.

During the convalescent state, the patient must carefully guard against any exposure to cold, intemperance, or any other cause likely to induce a relapse. A change of air and situation may help to expedite his recovery, particularly if assisted by daily moderate exercise in a carriage, or on horseback, a generous diet, cold bathing, stomachic bitters, and chalybeates. See various forms of these medicines in the Class of Tonics.

ERUPTIVE DISEASES ACCOMPANIED BY FEVER.

Under this head are to be enumerated the measles, small pox, chicken or swine pox, cow pox, scarlet fever, and ulcerated sore throat, miliary fever, shingles, nettle rash, erysipelas, and the plague; and these I shall treat of in the order set down.

OF THE MEASLES.

The measles are known by the appearance of small eruptions, somewhat resembling flea bites, over the face and body, but particularly about the neck and breast, not tending to suppuration. Many of these spots soon run into each other, and form red streaks or suffusions, larger or smaller, which give the skin an inflammatory appearance, and produce a perceptible swelling of the face; each spot is raised a little above the surface, especially in the face, where they are manifest to the touch; in the limbs and trunk they form only a roughness.

The disease is highly infectious; often prevails epidemically, however, and the constitution that has been once under its influence is seldom liable to a second attack. It only happens when the person has at first had a very mild or spurious species of measles.

Symptoms.—It has been common to consider the disease as either benign or malignant.

The first is ushered in with shiverings, succeeded by heat, heaviness in children and headache in adults, a slight inflammation and much heat in the eyes, attended with a swelling of the eyelids, a flow of acrid tears, and an inability to bear the light. These are followed very soon by frequent sneezing, and a serous discharge from the nostrils, hoarseness, difficulty of breathing, with a cough, considerable febrile heat, sickness at the stomach, and perhaps a vomiting. The tongue is foul and white, the thirst great, and the pulse is frequent and strong.

About the fourth day, small red spots make their appearance, first on the face, and afterwards successively on the lower parts of the body, which increase, run together, and form patches. The spots on the face sometimes appear a little prominent to the touch, but on other parts do not rise higher than the surface of the skin.

On the fifth or sixth day, the vivid red is changed to a brownish hue, and in a day or two more the eruption entirely disappears, with a mealy scaling of the scarf skin or cuticle, and is replaced by a new one. The symptoms do not go off on the eruption coming out, with an exception to the vomiting; the cough and headache continue with the weakness and defluxion on the eyes, and there is a considerable degree of fever, with much anxiety and oppression at the chest. At the period that the cuticle peels off in scales, a purging is apt to come on, and continue for some time.

In the malignant measles the eruption appears more early, and all the symptoms before enumerated are in an aggravated form. The mouth and throat assume appearances similar to those in the ulcerated sore throat, and the disease is attended with a fever of the typhous kind, and symptoms of putrescency, but, more particularly, livid spots are interspersed between the eruptions.

Causes.—The measles are produced by a specific infectious, or

contagious matter received into the constitution, if this is predisposed to favour the progress of such matter, and produce febrile effects in the habit; for if such a predisposition be wanting at the time that this disease, or any other of a similar nature, is epidemical, the effects peculiar to infectious or contagious matter cannot be produced. Children are more liable to the measles than grown people, and the winter is the season of the year when the disease is most apt to be prevalent.

The symptoms which characterize measles and distinguish it from other eruptive disorders, are the dry cough and hoarseness, the heaviness of the head and drowsiness, the appearances of the eyes, which are red, swelled, itchy, very sensible to light, and frequently beset with tears, together with frequent sneezing, and an acrid thin discharge from the nostrils.

We are to regard in a favourable light the febrile and other symptoms being mild; a gentle moisture diffused equally over the whole body on the coming out of the eruptions; early and free expectoration, and open bowels. On the contrary, the fever increasing after the appearance of the eruptions, great pain in the head and eyes, anxious respiration, no expectoration before the fourth day, an inflammatory affection of the lungs, a small but rapid pulse, delirium, the sudden disappearance of the eruptions, or these becoming of a livid hue, violent purging, great loss of strength, purple spots on different parts of the body, with other marks of putrescency, are very unfavourable symptoms: indeed, the latter clearly point out that a fatal termination is near at hand.

A disposition to consumption, attended by hectic fever and an obstinate inflammation of the eyes, are not unfrequently observed after measles have gone off, and ought therefore to be carefully guarded against.

Treatment and Regimen.—In the mild or benign species of the disease, a strict attention must be paid to the prohibition of animal food, confining the patient to a very spare diet, and for common drink, taking barley water acidulated with lemon juice, and the like as herein after mentioned. His bed room should be kept moderately cool, regulating the temperature thereof by his feelings, at the same time carefully guarding against any sudden change.

To abate the heat and moderate the febrile symptoms, it will be advisable, as the first step, to give some mild purgative (see P. 2 or 4, in this Class) to carry off feculent matter from the bowels; and throughout the remainder of the disease, a proper attention ought to be paid to their not being confined.

With the same view of moderating the heat and other febrile symptoms, we may give the saline mixture combined with nitrate of potash, and the sixth of a grain of tartarized antimony in each dose; or we may substitute a pill, of from half a grain to one grain, (according to the age of the child or person) of the antimonial powder, formed with a little confection of roses, or mixed with currant jelly, washing it down with the simple saline draught or mixture. See the Class of Diaphoretics, P. 5.

If the febrile symptoms run high, and are accompanied by a harsh dry cough and difficulty of breathing, we must order the patient to be bled in the arm, proportioning the quantity of blood drawn off to the habit and age of the sick, as well as to the violence of the symptoms. Should the latter not be greatly moderated by the operation, it will be proper to have recourse to local bleeding, by the application of six or eight leeches to the chest.

If after these means, the difficulty of breathing, pain in the chest, and cough still continue, (evidently denoting the presence of local inflammation) it will be advisable to apply a tolerable sized blister to the breast.

The hoarseness, inflammatory affection of the throat, and cough, may be palliated by barley water, thin arrow root, orgeat and water, or a solution of gum acacia, sweetened with capillaire. Any of these may be taken with the chill just removed, in small quantities, and frequently. The addition of a little lemon juice, or of a small quantity of nitre, will add to their pleasantness as well as efficacy. See the Class of Antiphlogistics, P. 3.

To appease the coughing, the almond emulsion (see P. 1, Class of Expectorants) may be taken from time to time, and when the fever is abated considerably, the addition of some preparation of opium will be proper ; but until this takes place, an opiate will neither abate the cough nor procure rest. Inhaling the steams arising from warm water with a small addition of vinegar, by means of a tea pot, or by inverting a funnel over the basin filled therewith, if a proper inhaler is not at hand, will prove of some utility.

If a looseness comes on, and is only moderate, it should not be checked, but where it is severe, it will be necessary to prescribe some mild astringent, conjoined with opium. About five drops of the tincture of opium may be given with ten grains of prepared chalk, in ten drachms of cinnamon water.

Should it continue, and threaten great exhaustion, we should call in the aid of more powerful astringents. See this Class, P. 5, 6, or 8.

When the eruption strikes in suddenly, or disappears before the proper period, and great anxiety, delirium, or convulsions ensue, we should endeavour to restore the eruption by putting the patient into a warm bath, and afterwards giving him warm diluent drinks, applying a blister to the chest and legs, and administering the camphor mixture with æther and antimonials. The latter may be given to the extent of from two to three grains of the antimonial powder in a little jelly, washing it down with one ounce and a half of camphor mixture, to which a drachm of the compound spirit of æther has been added.

If much debility of the system should come on, denoting a tendency to putrescency, or a malignant form of the disease, the treatment recommended in typhus fever must be adopted. The strength should be supported with cordials, beef tea, calf's feet jelly, &c. and the Peruvian bark, with mineral acids, port wine, &c. be given.

An infusion of malt with the addition of a dessert or table spoonful of yeast to a quart of the former, has been found of service in many diseases where purple spots, and other symptoms of putrescency, are manifest.

Persons recovering from the measles should be careful not to expose themselves too soon to the cold air, lest some distressing complaint should ensue. The food ought for some time after to be light, and the drink diluting.

After the termination of measles, there is frequently an inflammatory disposition remaining, and marked by a pain in the side, difficulty of breathing or tightness at the chest, accompanied by a cough, which, if not attended to, is apt to end in consumption. It will be advisable in such cases to apply a blister over the chest, and should this prove ineffective, either bleeding from the arm, or topically by means of six or eight leeches, will be necessary. In addition to these means, the patient must be kept close to a diet consisting of milk and vegetables; he should be removed, if an inhabitant of a city, to a pure air; he should wear a flannel waistcoat to his body, and he should ride daily on horseback when the weather will admit of it. If these do not remove the tendency to pulmonary consumption, he should, on the approach of winter, either retire to Penzance, Sidmouth, or some such mild situation; or he should remove to a warmer clinate.

After the measles are gone off, it will be advisable to give one or two doses of some mild purgative. (See this Class.) Cooling laxative medicines are essentially necessary after this disease to carry off the remaining disposition to inflammatory affection of the lungs. Indeed, throughout every stage of the malady, the state of the lungs are to be carefully attended to; for it is from the effect on them that the danger of the measles in most cases depends.

This disease, as well as the small pox, may be communicated in various ways, such as either from cotton imbued with the matter, and rubbed on the skin, or by introducing a little of the sharp humour which distils from the eyes or nose of the patient into the blood; but no great advantage is likely to be derived from the practice, as it is very doubtful whether a milder disease or not has resulted from inoculation.

OF THE SMALL POX.

The small pox is commonly divided into two sorts, the distinct and confluent; being known by the former appellation when the pustules are perfectly separate and distinct from each other, and by the latter, when they are very numerous, and run one into the other, or coalesce.

Symptoms.—The eruption in the distinct small-pox is ushered in with shiverings succeeded by heat, pains in the head, back, and loins, nausea, vomiting, a disposition to drowsiness, and in very young children, not unfrequently, by convulsions, resembling

epileptic fits: the pulse is quick, with considerable thirst, great heat of the skin, and restlessness.

About the third or fourth day from the commencement of indisposition the eruption makes its appearance; little red spots are to be seen, like flea bites, which feel hard in the skin, when pressed with the finger, and are dispersed over the face, hands, fore part of the arms, neck, and upper portion of the breast. About the fifth or sixth day from the attack, the pustules begin to swell, grow hot and painful, and round their basis the colour of the skin appears of a florid red. At this period the spittle becomes increased in quantity and is viscid; at the same time that there is a degree of swelling of the throat, difficulty of swallowing, and considerable hoarseness.

About the eighth or ninth day, the pustules are completely formed, and arrive at their full state. The fluid contained in them has the appearance of white matter. The face now swells, and this extending to the eye-lids, they often become so much enlarged as to close the eyes, and when the pustules are numerous, the whole countenance appears inflated and changed, so as to have scarcely any resemblance of the natural features.

The pustules have generally attained their full size (which is usually that of a small pea), about the eleventh day, and the matter contained in them has changed from a white to an opaque yellow, and a dark spot appears on the top of each. At this period, the swelling of the face subsides, and now the hands and feet begin to be puffy and swelled; what is known under the name of secondary fever now also usually makes it appearance.

After the eleventh day the pustules from being smooth become rough, break, and discharge their contents, which, drying on the surface, form a small crust over each of them. After a short time these fall off, and leave the part they covered of a dark brown colour, which frequently continues for many days; and in cases where the pustules have been large, or late in becoming dry, deep marks or indentations of the skin remain behind. The swelling of the hands and feet gradually goes off, and about the seventeenth day the secondary fever disappears.

The confluent small pox differs from the distinct or benign, both in its progress and symptoms. The eruptive fever often shews at an early period a tendency to the typhoid form, and is frequently attended with considerable stupor, or perhaps delirium.

The eruption is irregular both in its appearance and in the succession of its stages. An efflorescence usually appears on the face, from which the pustules emerge in the form of small red points on the second day, many of which soon run into each other and form clusters. Instead of containing yellow well-conditioned matter, they are filled with a brown acrid fluid, and the intermediate spaces between the clusters appear pale and flaccid; whereas, in the distinct species, they are surrounded by an inflamed margin. The swelling of the face, and the salivation, rise too a much greater

height, and appear earlier than in the benign. The fever does not cease upon the appearance of the eruption, although it suffers a slight remission, and about the ninth day it is considerably increased. In some cases, we can observe the worst symptoms of malignant typhus to ensue; the eruptions put on a livid appearance, purple spots intervene between them, blood is discharged from different outlets of the body, and the patient's life falls a sacrifice about the eleventh day from the commencement.

Causes.—The small pox is commonly caught by infection, and conveyed either by the introduction of a small quantity of the matter into the system by inoculation, or by an exposure to the effluvia or exhalations arising from the body of those who are afflicted with the disease. The small pox may prevail at all seasons of the year, but is usually most prevalent in spring and summer. Persons of all ages are liable to its attacks, but children the most so, and those of a gross habit of body run the greatest hazard from it. The contagion is to be considered of a specific nature, and it very rarely happens that any person is attacked a second time with the disease, but instances to the contrary have now and then occurred.

The danger in this disease is to be estimated by the nature and number of pustules, and chiefly by those on the face and breast; as also by their manner of coming out. The slower and more regular they make their appearance, the more favourable they are to be considered. The fewer there are in the face, or on the breast and the neck, the better.

The pustules being very numerous, and, instead of filling kindly, becoming flattened, being of a livid colour, or interspersed with purple spots or patches, and the accompanying fever assuming the form of typhus, are very unfavourable symptoms; as are also the striking in of the eruptions, the subsiding suddenly of the tumefaction of the face and extremities, the suppression of the salivation, or depression of the pustules, especially if followed by great anxiety, much loss of strength, universal paleness of the skin, stupor, delirium, or convulsions.

Where the disease proves fatal, the patient generally is carried off on the eighth or ninth day, in the distinct kind, and between the eleventh and seventeenth in the confluent. The termination of the secondary fever is usually accompanied with a purging, or a copious sediment in the urine.

The only disease for which the small pox can be mistaken, when of a mild nature, is the chicken pox: in the latter, however, the pustules usually go back without a formation of proper matter in them. In appearance, number, size, and course, through the different stages, they differ much; but notwithstanding these circumstances, there are just grounds for supposing that the two diseases are sometimes mistaken, and that the matter of the chicken pox has unknowingly been employed at times for the variolous in inoculation.

Treatment and Regimen.—These are to be conducted on the

plan of moderating the fever when it runs high; in obviating those circumstances that may produce any irregularity in the appearance of the eruptions, or in the progress of the disease, and in supporting the strength when defective.

To moderate and confine the fever within due bounds, it will be essentially necessary to keep the patient cool, by allowing a free admission of pure air into his chamber; by obliging him to remain up as much as possible, or by covering his bed moderately with clothes, if confined by necessity thereto; by frequently giving him cold diluting fluids to drink, such as lemonade, imperial, barley water, or thin gruel acidulated with lemon or orange juice; and by administering the saline draught joined with a few grains of nitre, every four or six hours. To keep the bowels open, and thereby dimininish the febrile action, a cooling laxative of the saline kind (see this Class, P. 6, 11, or 13) should be given occasionally.

If there is much nausea, or inclination to vomit, at the commencement of the disease, the stomach is to be relieved by washing it out with weak chamomile tea, or common hot water; but where the vomiting is obstinate, which is apt to be the case, it is to be relieved by giving the saline medicine in the act of effervescence, adding a few drops of the tincture of opium to each dose thereof.

Should the throat be much affected, and there be great difficulty of swallowing, a blister may be applied to the neck, and gargles composed of an infusion of roses with diluted sulphuric acid (see the Class of Detergents, P. 1 or 3) be used frequently. When the eye-lids are much swelled, and the head is painful, we may apply a leech to each temple, and afterwards, if necessary, a blister behind each ear. If there is much coughing, with a difficulty of breathing, the application of a blister over the chest, and pectoral medicines will be advisable. See the Class of Expectorants, P. 1, 3, or 6. Bleeding is a remedy only to be resorted to in full and robust habits, and where the febrile symptoms become violent, as the subsequent debility generally overbalances the temporary advantage that may result from the remedy.

Where there is great irritability, with restlessness, opium in small doses, conjoined with antimonial powder, (say a quarter of a grain of the former with two grains of the latter, formed into a pill, with a little confection of roses,) will be advisable. This may be taken every six hours, washing it down with a saline draught. For children, the syrup of poppies, to the extent of a tea-spoonful, will be more appropriate than opium in any form.

If a purging arises, it should not be interfered with, unless where it becomes severe and produces considerable debility. Where costiveness attends it should be obviated by some gentle purgative, such as three grains of calomel, with about ten of rhubarb or jalap. Experience evinces the necessity of keeping the bowels gently and regularly open. As small doses of mercury are often serviceable in moderating the febrile action in small pox, no incon-

venience is likely to arise from the administration of the above dose, but, on the contrary, some benefit.

When the eruption subsides suddenly, or the pox sink at the top, and any threatening symptoms shew themselves, such as rigors, delirium, or convulsions, we must support the patient with wine, camphor, and æther, applying at the same time a blister to each thigh, and cataplasms of mustard to the soles of the feet and palms of the hands. See the Class of Stimulants, P. 13.

Should great debility become apparent at any period, we ought to administer the bark in wine, diluted with water, and at the same time allow a more generous diet than what the patient was limited to at the commencement of the disease.

When purple, livid, or black spots appear among the eruptions, the bark must immediately be administered in as large doses as the stomach will bear, joined with some mineral acid, such as the muriatic, or diluted sulphuric. (See Malignant Fever.) These should be repeated every hour or two. The patient's drink ought at the same time to be generous, consisting of wine diluted with water, and then acidulated with the juice of lemon, jelly of currants, or such like. His food may be roasted apples, preserved cherries, currants, and other fruits of an acid nature.

The most dangerous period of the disease, is the accession of the secondary fever, which usually takes place when the pox begin to turn on the face, and assume a dark or black colour; and most of those who die of the disease are carried off by this fever.

A purging not unfrequently arises as an effort of nature to relieve herself of the peccant matter at this time, and her endeavours in this way ought not to be counteracted, but rather promoted, supporting the strength at the same time by nourishing food and wine in a state of dilution.

Where the bowels are costive instead of being relaxed, we must employ gentle purgatives during the period just alluded to. If the pulse be very quick, hard, and strong, the heat intense, and the breathing oppressed and laborious, with other symptoms indicating an inflammation of the chest, we should have the patient bled, regulating the quantity of blood drawn off by his age and strength, as also by the violence of the symptoms.

But during the secondary fever, if the pustules become suddenly pale, and if there be great coldness of the extremities, the patient must be supported with wine and other cordials, such as camphor, æther, &c. Blisters ought also to be applied.

Should the secondary fever be of a typhoid nature, the means recommended under the head of Malignant Fever must be adopted.

Where the pustules begin to turn of a yellow colour, I am of opinion that it will be advisable to open them in succession as they ripen, which may be done with a lancet or needle, and the operation be repeated a second time, should they refill. The secondary fever, in all probability, will be greatly lessened by adopting this

practice; whereas, by neglecting it, the face may be much disfigured with deep pits, and injurious consequences may ensue from the acrid matter being quickly reabsorbed, or taken up into the mass of circulating fluids.

After the disease has gone through all its stages, and is about to cease, it will be necessary to give the patient two or three purges. (See the Class of Purgatives, P. 1, 3, or 4.) It will be right never to omit these, as some troublesome disorders, such as inflammation of the eyes, swellings in different parts of the body, or a tendency to pulmonary consumption, are apt to arise where they have been neglected. There may be an interval of four or five days between each dose of the purgative medicine.

If the eyes become inflamed after the pox dry up, and the disease ceases, the remedies advised under the head of an inflammation of these organs must be employed, keeping up at the same time a drain in the neighbourhood of the parts, by the application of a small blister behind each ear, and dressing them afterwards with savin ointment, or that made of Spanish flies.

When swellings or imposthumes arise, we ought to hasten their suppuration as speedily as possible by an emollient poultice, such as that of the crumbs of bread, milk, and a little lard or sweet oil frequently renewed; and when the tumours become of a sufficient softness, we should open them, taking care to give the patient one or two purgatives afterwards. If any abscess is of considerable size, and the discharge very great, it will be advisable to administer the Peruvian bark, and to allow a generous diet.

Should a difficulty of breathing, accompanied by a cough, or other symptoms pointing out a tendency to incipient consumption, succeed the small pox, the several means advised in the first stage of this disease ought immediately to be adopted.

It is a fact, fully and long established, that by applying variolous matter to a scratch or wound, so that it shall be absorbed into the constitution, a much milder disease, and fewer eruptions will be the result, than when the small pox takes place in the natural way; and therefore inoculation has pretty generally been adopted throughout every civilized part of the world. It has been computed that a third of the adults who take the small pox in a natural way are destroyed by it; whereas, out of those who receive it by inoculation, and who are afterwards treated properly, the proportion of deaths does not exceed one in six or seven hundred.

From this statement, it clearly appears that inoculation is highly beneficial to *individuals*, by lessening the danger; but it may, at the same time, be asserted, that it has not proved of benefit to *mankind* in general, but the reverse; as the bills of mortality prove that the small pox has increased in England alone in the proportion of nineteen to every hundred since the introduction of inoculation. This has been owing to the want of proper laws to prohibit inoculated persons from appearing in public, and intermixing with those who never have had the disease. The small pox is thereby propa-

gated afresh, and often extends far and wide, committing dreadful and extensive ravages.

Instead of being kept up by inoculation, every endeavour should be exerted to exterminate the disease; and the only certain method to effect this, is for the government to enact laws to prohibit inoculation for the small pox in future, substituting in its stead inoculation with vaccine matter.

Disapproving as I do of keeping up the small pox by inoculation, I shall refrain from laying down any rules for its performance, and do strongly recommend vaccine inoculation in its stead, being fully satisfied, not only by my own experience, but of that of thousands of other practitioners in medicine, in various parts of the civilized world, that it is not only a mild disease, secure from any danger, but that in 999 cases out of a thousand, it effectually secures the person throughout the remainder of life from any attack of the small pox, either by this disease prevailing epidemically, or by its poison being introduced by inoculation, even although frequently repeated.

A case, however, has lately been reported in the weekly paper published at Salisbury, of a child who was destroyed by the small pox taken in the natural way, having been vaccinated a year or two before. This is a very rare instance indeed, and I am strongly inclined to think that the matter employed on the occasion could not have been sufficiently active to have made a proper impression on the child's constitution, so as to ensure its safety from variolous infection. At any rate, small pox has been known in many instances to have recurred a second time; and cases have lately been reported in the Edinburgh Journal of two soldiers, who, bearing evident marks of this disease in their faces and other parts of their bodies, were attacked by it a second time, and one of them died in consequence thereof.

I would recommend every parent that has his children vaccinated, to test them some months afterwards by variolous inoculation to insure their safety.

COW POX OR VACCINE DISEASE.

It is about twenty-five years since a treatise on this disease from the pen of Dr. Jenner was laid before the public, making it known therein, it had been discovered that those who had been infected by it, were, in general, secured ever afterwards from the infection of the small pox; that it was a very mild disease in comparison with the latter, never having been found to prove fatal; and, moreover, that from its not being infectious but by inoculation alone, it might be introduced into a family without extending to others.

In many of the dairy countries, it had long ago indeed been observed, that cows were subject to an eruption on their tits and udders, which occasionally was communicated to the fingers and other parts of the hands, of those who milked them, giving rise to a few ulcerations, accompanied by some degree of fever; and it

had been noticed that those who had thus gone through the vaccine disease were not afterwards ever attacked by the small pox, either naturally or by inoculation. This knowledge had, however, never been improved, or acted upon, until Dr. Jenner's publication; and it is to him that mankind are indebted for the promulgation of this valuable discovery.

The pustules on their first appearance, when the infection is received from the cow, somewhat resemble small vesications occasioned by a burn; these superficial suppurations assume a circular form, their edges being more elevated than the centre, and are of a blueish colour; tumours, in consequence of the absorption of the morbid poison, appear in the arm-pits, with some affection of the system, such as slight shiverings, lassitude, a quick pulse, sickness at the stomach, vomiting, and occasionally delirium. These symptoms, however, generally go off in a few days, leaving the ulcers in a state unfriendly to healing.

It is now well ascertained, however, that the vaccine virus is rendered much milder by passing through different persons, than when received immediately from the cow; and so gentle is the disease when it arises from inoculation, that the aid of medicine is seldom, if ever, necessary, either prior to the appearance of the pustules, or during their continuance or suppurative stage; but as soon as the eschar on the arm where the vaccine matter was introduced, begins to become dry, and the few pustules which had shewn themselves to disappear, it may be advisable to give one or two doses of some gentle purgative, suffering three or four days to intervene between each dose. For an adult, five grains of submuriate of mercury, with a scruple of jalap, or of rhubarb, will be a proper dose; for more youthful persons, and children, the quantity of each medicine must be reduced in proportion to the age.

The following circumstances are deserving of attention in inoculating for the cow pox, and substituting this mild and safe disease for that dangerous and pestilential one, the small pox.

1. That the matter with which we inoculate, be not taken later in the disease than the ninth day.

2. That the fluid be perfectly transparent, as it is not to be depended upon when it is in any degree become opaque.

3. That the matter taken should be allowed to dry gradually and thoroughly before it is laid by for use, when not employed immediately, or in its fluid state.

4. That the punctures with the besmeared lancet be done as superficially as possible, and only one be made in the same arm.

Here it may not be improper to remark, that the inoculation for this disease will not be likely to succeed well if there be any herpetic eruption on the skin. On the third or fourth day after inoculation, the wound will appear a little prominent round its edges and red, which will keep increasing to about the ninth or tenth day, when the constitution will shew some symptoms of being affected, such as a slight degree of febrile heat, and probably a little enlargement of the glands in the pit of the inoculated arm.

Should any excess of inflammation happen to arise in the inoculated part, immediate attention should be paid to it, by employing cold and refrigerating applications. See the Class of Refrigerants, P. 1.

It will be of the highest importance after vaccine inoculation, to ascertain fully that the vesicle in the arm has not acted *locally*, but that it has effected the desired change in the constitution. With this view, it may be advisable to re-vaccinate at some after period, to test the security from any exposure hereafter to variolous infection. If parents will not be satisfied with this test, matter taken from a small pox pustule may then be substituted instead of the vaccine. In one instance out of ten thousand, perhaps, small pox may take place after the constitution has been satisfactorily acted upon by vaccine inoculation, and even when this has happened, the disease has usually been very mild indeed.

Some persons have been known to have the small pox a second time, and this irregularity may perhaps account for a few of the cases of small pox which have occurred after vaccine inoculation. The majority of such cases may, however, justly be attributed to imperfect or improper vaccine matter having been employed for the inoculation, and which had not the power of securing the person so inoculated from the contagion of the small pox. This spurious sort of vaccine matter is wholly inefficacious. What is proper may always be had at any of the stations of the Royal Jennerian Society.

We have only to take a comparative view of the effects of the inoculated cow pox, the natural small pox, and the inoculated small pox to be fully satisfied of the decided preference to which the former is entitled.

The inoculated cow pox, uniformly, is a mild and inoffensive disease; it is neither loathsome nor attended with any danger; in general, it forms no eruption, except a pustule or two on the inoculated part; requires neither confinement, loss of time, nor expence, as few or no medicines are necessary; it occasions no subsequent disfiguration; induces no supervenient disease; and lastly, is not contagious, and may therefore be introduced into any family, or neighbourhood, without its extending to others.

It is well known that the natural small pox is frequently a painful, loathsome, and fatal disease; and that from a computation, one person in six falls a martyr to it. It is of a highly contagious nature, and spreads rapidly; the eruptions are painful, numerous, and disgusting in their appearance, and leave behind deep scars, or pits, especially in the face; it requires some weeks confinement, loss of time, and more or less expence, as medical treatment and attendance are requisite both during the continuance of the disease and afterwards; and when it ceases, it is apt to induce inflammation of the eyes, deafness, diseases of the skin, glands, and joints, and to bring into action scrofula, which is dormant in the constitution.

The inoculated small pox is generally mild, but in some instan-

ces is attended with all the violence, disgusting appearances, and danger of the natural. Of those who are inoculated, it has been computed that one out of three hundred is destroyed, and that one in forty has the disease in a dangerous form. Eruptions more or less numerous are scattered over the body, and the disease requires preparation by diet and medicine before the appearance of the eruptions, as well as confinement, loss of time, and expence during its different stages. It is, moreover, as contagious as the natural small pox, and where it proves severe, is apt to leave deep pits or scars behind it, as well as to call into action other diseases, particularly scrofula. Besides these disadvantages, it cannot be practised with safety in early infancy, or old age, nor during a state of pregnancy; whereas vaccine inoculation is subject to no such restrictions and inconveniences.

I shall conclude these remarks by observing that the Royal College of Physicians, and the different learned bodies of medical men, to whose consideration the merits of this important discovery have been referred by the legislature of the country, have almost unanimously pronounced vaccination to be a perfectly safe and effectual preventive of the natural small pox.

OF THE CHICKEN AND SWINE POX.

These diseases are the same, and differ only in name.

Symptoms.—The eruptions make their appearance, in many instances, without any previous illness; in others, they are preceded by a slight degree of chilliness, lassitude, cough, interrupted sleep, wandering pains, loss of appetite, and a febrile disposition for three or four days. Most of the eruptions are of the common size of those of the small pox, but they are not numerous or confluent. On the first day they are red, and much resemble, in their appearance, the small pox. On the second day, the red pimples have become small vesicles, containing a colourless fluid, but sometimes a yellowish liquor. On the third, the pustules arrive at full maturity, and in some instances so much resemble the small pox as to be distinguished with difficulty. When the little bladder is broken by accident or rubbing, as sometimes happens on the first or second day, there forms a thin scab, and the swelling of the other part abates without its ever being converted into proper matter, as it is in the small pox. The few which escape being burst, have the little drop of fluid contained in the vesicle at the top of them, turn yellow and thick, and it dries into a scab. On the fifth day of the eruption, the pustules are almost dried and covered with a slight crust, but no cicatrix, or mark, is left behind when this falls of.

The only disease for which the one under consideration can be mistaken, is the small pox of the mildest and most distinct kind; but the former may readily be distinguished from the latter, by the small degree of fever, by the eruption being generally first visible in the back, and each vesicle being filled with a limpid fluid on the

second or third day, and crusts covering the pocks on the fifth day, at which time those of the small pox are not at the height of their suppuration.

It is proper to remark here, that the pocks are occasionally so large, and come to such maturity, as to be mistaken for the small pox; and inoculators have been so unwary as to take matter from them, whereby some have been supposed to have taken the true small pox a second time, and others have fallen a sacrifice to the disease, under the fatal idea of their being secure.

The chicken pox is perfectly free from danger unless the eruption be of the confluent kind, a rare occurrence indeed, when it is to be appreciated from the degree of violence in the accompanying fever.

Treatment and Regimen.—The complaint is usually of so trivial a nature as seldom to require the aid of medicine; but should the febrile symptoms run high previous to the appearance of the eruption, or after it has shewn itself, it may be advisable to give the patient some cooling medicine (See the class of Antiphlogistics, P. 1 or 2,) from time to time; drinking plentifully of cool diluting liquors, and keeping the bowels open, if necessary, by some gentle aperient medicine. See Laxatives, P. 2, 3, 4, or 6.

After the disappearance of the eruption, one or two doses of any mild purgative (See this Class, P. 1, 2 or 4,) had better be administered with an interval of three or four days between each.

OF THE SCARLET FEVER.

This fever takes its name from the scarlet efflorescence that appears on the skin of nearly the whole body, which does not rise however over the surface, but is attended with heat, dryness, and itching. It happens at all seasons of the year, but is most predominant towards the end of summer or in autumn, at which time it frequently shews itself as the prevailing epidemic, chiefly attacking children and young persons, and afterwards extending through whole families.

There appear to be two species of this disease, viz.—first, the simple scarlet fever, which is of a mild nature, and secondly, the scarlet fever accompanied by ulceration in the throat, and malignant or putrid symptoms. We seem, however, to have just grounds for presuming that the different species of scarlet fever proceed from the same source; because, under the same roof, in large families some individuals have the disease in one form, others in another. The difference may arise from constitutional circumstances, and not from a difference in the contagion.

Symptoms.—The first species is preceded by coldness and shiverings, to which succeed a considerable degree of febrile heat, thirst, and a quickened pulse. About the fourth day, the face begins to swell, and patches of a florid red colour appear scattered over the skin in various parts of the body, which at length run into

each other, and put on the appearance of a red coloured suffusion, rather than of distinct spots. After three days these disappear, the cuticle or scarf-skin falling off in branny scales. It is no unusual occurrence for the patient to shew a disposition to dropsy, or effusion of lymph, in the cellular membrane of the body shortly afterwards.

The second species of scarlet fever is marked by previous lassitude, dejection of mind, pain in the head, followed by soreness and a sense of stiffness in the muscles of the neck and shoulders, shiverings, and other febrile symptoms. On the second day or so, the patient perceives nausea, sometimes accompanied by vomiting, difficulty of swallowing, and a hurried respiration, interrupted by frequent sighs. The skin is red, hot, and dry; the breath burning to the lips, there is great thirst, a quick, weak, and sometimes a hard pulse, and darting pains are felt in different parts, as if occasioned by the point of a needle or pin.

On or about the third day, there is a redder appearance about the face, neck, and breast; scarlet patches are noticed about the nose and mouth; the glands beneath the lower jaw are painful to the touch, and enlarged; and the palate, tonsils, and inside of the throat partake of the general redness. Specks and collections of thick mucus are frequently observed, similar to the sloughs which are seen in the malignant sore throat. In a few hours, the redness becomes universal over the whole body, and increases to a great degree of intensity. Upon pressure with the fingers, it disappears, and is perfectly smooth to the touch, nor is there the least appearance of pimples or pustules.

About the fifth or sixth day the intense redness abates gradually, and a brown colour succeeds, when the skin becoming rough, peels off in small scales like bran, and the patient is gradually restored to his usual health. It not unfrequently happens, however, that after a few days amendment, unaccountable languor and debility are felt, and these are followed by stiffness in the limbs, disturbed sleep, disrelish for food, an accelerated pulse, scarcity of urine, and dropsical swellings.

This second species of scarlet fever is apt also to be attended, in many cases, with putrid and malignant symptoms; and when these present themselves, there will be fresh danger. In addition to chilliness, languor, sickness, and oppression, there are great heat, nausea, and vomiting, with a small quick pulse, and a frequent and laborious breathing. Ulcerations appear on the tonsils and adjoinings parts, covered with dark sloughs, and surrounded by a livid base. The efflorescence appears about the third day, but without any relief; it assumes a dark or livid colour, and between the patches, purple spots are intermixed. Delirium arises, and not unfrequently a severe purging takes place, or hemorrhages of blood break forth from the mouth, nose, or fundament, under which the patient sinks.

This malignant form of the disease very closely resembles the

putrid or ulcerous sore throat, and by many is supposed to be the same.

Cause—The scarlet fever is occasioned by a peculiar contagion, and is highly infectious. It sometimes prevails epidemically, owing probably to a peculiar state of the atmosphere.

The diseases which most nearly resemble the scarlet fever, are the measles, erysipelas, and malignant sore throat.

It is to be distinguished from the measles by the appearance of the eruption, its greater extent, its not being elevated into pimples, by the affection of the throat, and by the absence of much cough, sneezing, or discharge of a limpid acrid fluid from the eyes and nose.

By comparing the appearances in erysipelas with those just described in scarlet fever, the latter may readily be distinguished from the former.

The scarlet fever is to be distinguished from the malignant sore throat by the first being more inflammatory, whilst the latter is accompained by a fever of the typhous type: moreover by the absence, in general, of sloughs or ulcers in the former; by their presence in the latter. Scarlet fever, for the most part, prevails towards the end of summer, and in autumn, and attacks the most vigorous and robust; whereas the malignant sore throat is more frequently met with in the spring and winter, and it usually attacks the delicate and weakly. In scarlet fever, the skin is of a bright red, smooth, and always dry, and hot: in the malignant sore throat, it is red and pimply, the pimples being redder than the intervening spaces. Scarlet fever terminates upon the third, fifth, eighth, or eleventh day; whereas the termination of the malignant sore throat is irregular.

The favourable circumstances in scarlet fever are the attendant fever being purely inflammatory: a remission of the febrile symptoms and of the affection of the throat ensuing upon the coming out of the eruption; the eruptions appearing late, and if any hemorrhage takes place from the nose, its being of a florid red colour.

The following symptoms are to be regarded in an unfavourable light. The eruption being preceded by great anxiety, nausea, and vomiting; the mouth and throat being of a dark red or purple colour without swelling, but beset with ash coloured or grey specks, which soon become ulcerated; there being great loss of strength, delirium, or stupor: the eruption coming out as early as the second day; its appearing in patches, with purple spots intervening; glandular swellings arising; there being much difficulty of breathing, and a peculiarly stridulous voice, shivering, an extension of the disease to the windpipe and lungs; a discharge of very acrid matter from the nose, highly fetid breath, purging ensuing, or discharges of blood from the nose, mouth, or other outlets of the body taking place.

Treatment and Regimen.—Simple scarlet fever is usually of so mild a nature as to require little aid from medicine, and in general

all that is necessary is to confine the patient to a low diet, and to avoid cold air. If the thirst is considerable, some cooling acidulated liquor, such as barley water with a proper proportion of lemon or orange juice squeezed into it, may be employed for ordinary drink.

Where there is much nausea, or a disposition to vomiting at the commencement of the disease, a gentle emetic (see this Class, P. 1.) may be advisable. Should the bowels be confined, a mild aperient (see the Class of Laxatives, P. 1 or 3,) ought to be given, and throughout the course of the disease, the feculent contents of the intestines are to be removed, if required, by the same medicines, occasionally substituting an opening clyster, as in Prescription 16, of the same head.

If the febrile symptoms run high, and the skin is dry and hot, the saline mixture (see the Class of Antiphlogistics, P. 4,) in the dose of two table-spoonsful may be taken every three or four hours. At night, the feet and legs may be immersed in warm water.

In that species of the disease where there is ulceration of the throat, we must, in addition to the means already pointed out, have recourse to frequent gargling, as well as the outward application of some stimulant embrocation, or liniment. As a gargle, we may direct either of the P. 9, 10, or 12, Class of Antiseptics, to be used several time sa day; and should the patient be averse, or unable to wash the ulcerated parts in this way, it may then be done by throwing the fluid into the mouth by means of a small syringe. As an external application, the throat may be well rubbed morning and night with strong liniment of ammonia, joined with camphor, (see P. 7, 8, or 9, Class of Stimulants,) after which a piece of flannel should be applied round it.

Inhaling the steams arising from warm water, with an equal proportion of vinegar, might probably afford some additional aid. Where there is a tendency to malignancy or putrescency, these several remedies will be doubly requisite.

It is much the practice to apply a blister round the throat, or between the shoulders, according as there is either a difficulty of swallowing, or delirium, and no doubt such a remedy may be proper and useful at an early stage of this species of scarlet fever; but where there is great debility, with a tendency to putrefaction, and marked by coldness in the extremities, and purple spots between the patches of efflorescence, the blistered part would be apt to become gangrenous and mortify.

Camphor is a medicine much used in this species of scarlet fever, and often with a good effect, particularly when conjoined with the subcarbonate of ammonia. About ten grains of the latter, dissolved in an ounce and a half of camphor mixture, may be given in the form of a draught every four or six hours. In those cases where the pulse is low and fluttering, or the efflorescence suddenly disappears, this will be the more necessary; and, to add to its effect, a warm bath with the use of wine in a moderate quantity, may also be recommended.

At a very early stage of the disease, and where the heat of the body is considerable, and steadily above the natural degree, the application of cold water by affusion (as noticed under the head of typhus) has been much practised, and with very singular advantage; but where the disease is of some days standing, it will be most advisable to be content with frequently sponging the body with cold water and vinegar.

It is to be borne in mind, that throughout the whole course of scarlet fever, the state of the bowels is to be carefully attended to. If they are confined, a few grains of rhubarb with one or two grains of calomel, may be given to dislodge their feculent contents; but if, on the contrary, a purging arises, recourse must immediately be had to proper medicines for putting a stopt to it. See the Class of Astringents, P. 5 and 6.

Where a putrescent tendency is obvious, the only remedies to be employed with any hope of relief, are cordials and antiseptics, such as wine in considerable quantities, Peruvian bark, and mineral acids. See the Class of Antiseptics, P. 5, 6, or 8. At the same time that we administer these remedies, we should employ the stimulant and antiseptic gargles before noticed. Indeed, the treatment must be similar to that advised under the head of the malignant or ulcerous sore throat.

The swelling of the legs, and other dropsical appearances which are apt to shew themselves after some cases of scarlet fever, are to be obviated by allowing the patient a generous diet, with a fair allowance of wine, and by putting him under a course of tonic medicines, joined with those of a diuretic nature. See the Class of Tonics, P. 12 and 13. If necessary, the bowels are to be kept open, at the same time by giving some aperient occasionally. See the Class of Laxatives, P. 4 or 6.

At the decline of all severe cases of scarlet fever, a generous diet, with the Peruvian bark, or sulphate of quinine, joined with mineral acids, and some stomachic bitter (see the Class of Tonics, P. 9, 10, and 27,) will be advisable, the good effects of which may be assisted by gentle exercise taken daily.

It should be understood that the doses of medicine prescribed in the treatment of this fever are intended for adults, and that a proportionable reduction of them will be requisite for those of a more youthful age, and young children.

Scarlet fever is of a very contagious nature, and therefore immediate attention will be requisite in any family in which it makes it appearance, to prevent its being extended to others. The way to effect this is fully pointed out under the head of Means for Preventing the Extension of Infectious Diseases and Destroying Contagion.

OF THE ULCEROUS OR PUTRID SORE THROAT.

Symptoms.—This disease is usually ushered in with shiverings, succeeded by heat, nausea, vomiting, restlessness, and debility. The face then becomes flushed, the eyes red, there is a sense of stiffness in the neck, with a hoarseness of voice and soreness of the throat; upon an inspection of which the whole internal parts of this and the mouth have a fiery red appearance. Pale or ash-coloured spots are, however, here and there interspersed; and sometimes one broad patch, or spot of an irregular figure, and pale white colour, surrounded with a florid red, only appears. These whitish spots cover so many ulcers. The tongue is coated with a thick brown fur, the inside of the lips are beset with vesicles, and a thin acrid matter escapes from the mouth and nostrils, excoriating the neighbouring parts; there is often a purging, and sometimes a constant discharge of an excoriating fluid from the fundament: the pulse is small, frequent, and now and then irregular, and there is an obvious increase of the febrile heat and other symptoms towards evening; not unfrequently stupor or delirium ensues: there is also great depression of strength, so that the patient cannot sit up without fainting, and his breath is highly offensive.

About the second or third day, large patches of a fiery red colour appear about the neck, arms, breast, and fingers. These by degrees become dispersed over the whole body, and after continuing out for about four days go away, when the cuticle falls off in small branny scales.

In bad cases, the sloughs in the throat corrode deeper and deeper, and spread throughout the whole alimentary tube, or to the windpipe: the symptoms of irritation continue to increase, the ulcerated parts become gangrenous, a severe purging comes on, and the patient is deprived of life. This happens usually before the seventh day, and not unfrequently, as early as the third or fourth.

Causes.—The malignant or ulcerous sore throat arises from a specific contagion, and is of a highly infectious nature; but it may probably be occasioned at first by some atmospheric cause.—It more frequently attacks children than adults, particularly those of a relaxed or delicate habit of body, and prevails most during the autumn and commencement of winter, where there is a long continued moist atmosphere. Whatever tends to produce putrid or other malignant fevers may likewise occasion this species of sore throat; hence, a neglect of cleanliness and proper ventilation, damaged provisions, and damp air, will at least predispose to attacks of it. It is sometimes an attendant on measles which are of a malignant nature.

The ulcerous sore throat may readily be distinguished from the inflammatory species by the attendant fever. In the former, this is of the typhous nature; in the latter, it is purely inflammatory. By the absence of an eruption in the one, by its presence in the

other: by the inflammation in the throat in one disease terminating in a dispersion of the swelling, or its going on to suppuration; in the other, the ulcerated parts becoming gangrenous or mortified. The disease to which it bears the strongest resemblance is that species of scarlet fever which is accompanied by ulceration of the throat; but any nice distinction is unnecessary, as the same treatment will be proper for both.

The following circumstances are to be considered in a favourable light in the ulcerous sore throat, viz. the fever being moderate, and suffering a remission upon the appearance of the eruption; the skin, from being dry and parched, becoming moist and soft about the fifth or sixth day, and this followed by a diminution of the febrile symptoms; the eruption being of a florid red colour, and diffused equally over the whole surface of the body; the sloughs casting off in a kindly manner, and appearing clear and florid at bottom; and the breathing being free and soft, with a lively appearance of the eyes.

The unfavourable appearances are extreme weakness, frequent shiverings with a small fluttering pulse, dimness of sight, an obstinate purging; the eruption on the skin suddenly disappearing, or becoming of a livid colour; a hemorrhage of blood from any of the outlets of the body; a small hurried respiration interrupted by sighs; the inside of the mouth of a dark rose colour, with brown spots; the evacuation of stools of a black colour, a very fetid breath, clammy sweats, cold extremities, and hiccups.

Treatment and Regimen.—The ulcerous sore throat being a disease accompanied by fever of a typhoid nature, and in which the blood is disposed to run too rapidly towards putrescency, all large evacuations, either by bleeding or purging, are to be carefully avoided, and the strength of the system properly supported. The diet ought, therefore, to be generous and nutritive; consisting of thick gruel, barley water, preparations of sago, Indian arrow root, tapioca, panado, &c. with a due proportion of port wine, or even brandy. The ordinary drink should be wine well diluted and acidulated with the juice of lemons or oranges, as in negus.

The chamber of the sick should be kept cool, the floor often be sprinkled with warm vinegar, a free ventilation be allowed, the linen of the bed as well as that of the body be changed frequently, whatever passes by urine or stool be immediately removed and thrown at a distance, and fumigations with muriatic or nitric acid gas, as advised under the head of Means for preventing the Extension of Infectious Diseases and destroying Contagion, &c. be constantly kept up. All communication with the younger branches of the family should be prohibited; and, if possible, the sick should be lodged in a part of the house either very remote from the rest of the family, or perfectly detached. The nurse or attendants should be cautious not to receive the breath of the child immediately in their faces. Other necessary precautions for preventing

the spreading of this and other infectious diseases are pointed out under the head just referred to.

At the commencement of the malignant sore throat, due attention should be paid to the state of the stomach and bowels. As there is often nausea, and perhaps some degree of vomiting, it would appear an advisable step to give a gentle emetic. See this Class, P. 1 or 4. This will bring off any acrid matter, which, by getting into the bowels, might occasion a purging, an affection to be avoided as much as possible, as when it does occur it usually endangers the patient's life. We are at the same time to be cautious in not allowing any accumulation of feculent matter to take place in the intestines, and where costiveness prevails, to obviate it by a few grains of rhubarb, or a table-spoonful of castor oil, assisted, if necessary, by an aperient clyster. See P. 16, Class of Laxatives.

To abate the inflammation of the throat, and dispose the ulcerated parts to suppurate kindly, we should recommend the steam arising from warm water and vinegar (equal parts of each), to be frequently inhaled, having previously washed out the throat and mouth with some detergent gargle. See the Class of Detergents, P. 1 or 2. Where gargling is resisted by the patient (for it is an operation not readily adopted by children in particular) the wash may be thrown in by means of a syringe, and the ulcerated parts be afterwards touched with a camel's hair pencil dipped in a mixture of honey of roses and muriatic acid. Say one ounce and a half of the former conjoined with two drachms of the latter.

If the skin is very dry and hot, and the degree of attendant fever considerable, it may be advisable to give some medicine to moderate these symptoms, by promoting a moisture on the surface of the body. The best we can use for this purpose will be about three grains of the compound powder of ipecacuanha made up into a pill, which is to be taken every four or six hours, washing it down with two table-spoonsful of a mixture of equal parts of camphor julap and the saline medicine neutralized with ammonia, instead of the subscarbonate of potash. See the Class of Diaphoretics, P. 10. Antimonials must be administered with caution in the malignant sore throat, lest they should act downwards and excite purging.

Where the efflorescence on the skin becomes either very pale, or suddenly goes in, putting the patient's feet into warm water will be advisable.

If there is a considerable degree of swelling in the throat, we may direct the parts to be rubbed externally with some stimulating liniment, (see the Class of Stimulants, P. 7 or 8,) and if this does not prove sufficient, a catapalasm of crumbs of bread mixed up with a little mustard, may be put round the throat for a few hours. There might be danger in applying a blister, lest the inflamed part should ulcerate and become gangrenous.

Should the stomach become irritable, and vomiting arise in the course of the disease, it ought to be counteracted by giving the sa-

line medicine before mentioned in an effervescing state, joined with a few drops of the tincture of opium in each dose.

If a purging comes on, it must be stopped as speedily as possible by astringents joined with opium. See the Class of Astringents, P. 5 or 6.

Where any degree of strangury or difficulty in making water takes place, the belly must be well fomented with woollen cloths wrung out in warm water, and an emollient clyster be administered twice or thrice a day. See the Class of Emollients, P. 2 or 3.

In those cases where the ulcerations in the throat have a sloughy appearance, there is no remedy so likely to be attended with a good effect as the infusion of capsicum pepper. See the Class of Antiseptics, P. 9. This should be given in the dose of a large table-spoonful every half-hour, gargling the throat several times a day with the same medicine. By adopting this method, the sloughs will separate, and in general, the symptoms abate, although the patient probably will be left in a weak, languid, and low state for some time. In cases which have resisted every other mode of treatment, the happiest effects have resulted from a use of the capsicum remedy: it ought, therefore, never to be omitted. Where putrid symptoms manifest themselves, and are marked by great fetor of breath, and the ulcers in the throat assuming a gangrenous appearance, we must then have recourse to medicines which possess the power of counteracting this septic tendency. The Peruvian bark is immediately to be given in substance, decoction, or infusion, as shall sit best on the stomach, conjoined with some mineral acid, (See the Class of Antiseptics, P. 5, 6, 7, or 8.) and to prevent the stomach from becoming affected when the quantity of acid is considerable, a few drops of the tincture of opium may be added to each dose of the medicine.

Should there be any hemorrhage or discharge of blood from the nose or ears, tents dipped in some active styptic (See this Class, P. 2, 3, or 5), may be introduced, the patient taking, at the same time, two table-spoonsful of the acidulated infusion of roses every two or three hours.

It has been mentioned at the commencement of the treatment of the ulcerous sore throat, that the diet ought to be generous and nourishing, and that wine properly diluted, and acidulated with some vegetable acid, ought to be allowed freely, with the view of counteracting the tendency to gangrene, as well as supporting the strength of the system in general. No fixed rule, however, as to the quantity can be laid down; for this must be regulated by the age of the patient, the degree of debility that exists, and the tendency there may be to putrescency.

Where great weakness and dejection of mind, or profuse sweating towards morning, with other symptoms of approaching consumption, come on after the violence of the disease has gone off, the patient should be instructed to persevere in using a very generous diet; to change the air and situation, if possible: to ride on horse-

back or in a carriage daily, being cautious not to expose the throat to any current of air, and he should take two or three doses of the Peruvian bark, either in substance, decoction, or infusion, conjoined with twelve or fifteen drops of diluted sulphuric acid every day. See the Class of Tonics, P. 8 or 9.

OF THE MILIARY FEVER.

This is sometimes a primary disease, but it is much oftener a symptom of some other malady, and in most of these cases is the effect of having kept the patient too warm. It takes its name from the pustules or little bladders, resembling in shape and size the seeds of millet, which appear on the skin. They are sometimes white, and sometimes red. They are now and then to be observed dispersed over the whole of the body; but the breast, back, and other parts that are apt to be in a state of moisture, are those in which they are most numerous. Now and then the red and white pustules are intermixed, but in both the contained fluid has a sour smell, and is said to have a very acrid taste.

Symptoms.—This fever, like other eruptive ones, may be of different tendencies, either of the simple continued, the nervous, or the putrid, and the symptoms will vary accordingly. In general, however, the fever is preceded by a slight shivering, followed by heat, loss of strength, difficulty or oppression of breathing, great anxiety, sighing, and a low quick pulse. As the heat increases, there is a sense of itching or pricking in the skin, some time after which, a number of small pimples of about the size of millet seeds are to be observed, first on the neck and breast, and thence gradually extending to the trunk of the body and extremities. Their prominence is not, however, very perceptible to the sight, but very evident to the touch. After the appearance of the eruptions, there is an abatement of the symptoms, the pulse becomes more soft and full, the skin grows moister, and, as the disease advances, the perspiration begins to have a peculiar sour and rank odour.

After a lapse of twelve or fourteen hours, a small vesicle or bladder appears upon the top of each pimple, which is, at first, of the colour of whey, but soon becomes white. At other times, the pustules are of a red colour, which has occasioned the division into red and white eruptions. Both are, however, sometimes intermixed, and the matter contained in them has a sour and offensive smell.

About the sixth or seventh day from the first appearance of the eruption, the pustules break, and are succeeded by small crusts, which afterwards fall off in scales.

Where miliary fever tends to putrescency, it is then apt to be accompanied with purple spots, and other symptoms of putrid fever.

Causes.—Miliary fever is more frequently met with in women

than in men, especially those of a delicate or enervated frame of body; and such females are very liable to it in child-bed, and not unfrequently are destroyed by it. Among the causes which also predispose to attacks of it, may be enumerated debility, however induced, advanced age, preceding affections of the same disease, emotions of the mind, as grief, anxiety, or intense thoughtfulness, severe evacuations, a weak watery diet, want of due rest by night, the presence of irritating matter in the stomach and bowels, &c.; but the chief exciting cause of this fever, is immoderate sweating, produced by keeping the person too warm, or by giving heating medicines or drinks.

The characteristic symptoms which enable us to distinguish this disease from other eruptive fevers, are the uncommon anxiety and dejection of spirits, the profuse sweating, and peculiarly fetid rank smell which takes place.

The fever partaking more of the nature of the simple continued kind than of typhus; there being a remission of the symptoms upon the appearance of the eruption; and the pimples being of a florid red colour, are to be considered in a favourable light. On the contrary, the sweating obstinately continuing after the eruption has come out; an increase of fever with much anxiety, profound stupor, difficulty of breathing, frequent sighing, or the sudden disappearance of the eruption, followed by great prostration of strength, violent vomiting, a rapid weak pulse, the appearance of purple spots on the skin interspersed among the pimples, delirium, or convulsions, denote the destruction of the patient.

Treatment and Regimen.—Miliary fever frequently attacks delicate women after lying in, and the eruptions attending it have been considered by some as merely accidental, and not produced by any specific acrimony: whilst others have maintained the contrary opinion, and consider it a distinct species, and not to be confounded with the spotted or petechial fevers, which are only varieties of the putrid. In the proper treatment of the miliary fever, we must however be guided by the nature of the symptoms.

Before the appearance of the eruption, the febrile symptoms occasionally run high, so as seemingly to require a use of the lancet for the purpose of reducing them; but bleeding may be regarded as a very doubtful remedy, and unless under the most urgent circumstances, ought not to be resorted to, as it might greatly increase the debility invariably attendant on the disease.

For the purpose of diminishing the immoderate heat and sweating, it will be more advisable to have recourse to the cautious application of cold; and, therefore, the bed should be very slightly covered with clothes, fresh and cool air should be admitted freely into the chamber, and the patient be instructed to lie with the arms exposed.

As a medicine, the common saline mixture, with a few grains of the nitrate of potash added to each dose (see the Class of Refrigerents, P. 4,) may be taken occasionally, or we may recommend cooling acidulated drinks, such as lemonade, &c.

Where the bowels are confined or costive, their feculent contents should be evacuated by some gentle aperient, (see the Class of Laxatives, P. 2 or 6,) but we should never advise active purgatives, as they would add to the prevailing debility.

If the head is occupied with great pain, stupor, or delirium, a blister ought immediately to be applied betwixt the shoulders, provided the disease shews no symptoms of putridity.

Should the eruption strike in suddenly, and be followed by alarming symptoms, we should endeavour by every means to bring out, and support a copious perspiration by external warmth, and by powerful diaphoretic medicines. See this Class, P. 4 and 7. In this case, frictions to the skin, or the application of blisters, will likewise be proper. Where there is great restlessness with sighing, we may safely have recourse to some anodyne, such as a draught, consisting of ten drachms of camphor mixture, with thirty drops of the tincture of opium.

To support the strength of the patient where there are symptoms of great debility, it will be necessary to supply him with food and liquors of a generous nature, not omitting wine properly diluted, as in simple typhus fever; but where there are inflammatory symptoms the diet must be regulated accordingly, and be confined to vegetable preparations and weak animal broths.

When miliary fever is accompanied by a tendency to putridity, besides supporting the powers of life by a generous diet and a proper quantity of wine, we should immediately have recourse to the mineral acids, the Peruvian bark, and other remedies advised under the head of Putrid Fever.

OF THE SHINGLES.

This disease is characterized by an eruption, which, in the generality of cases, extends half round the waist; but in a few goes nearly round the body, and appears in small vesicles, containing a limpid fluid; the surrounding skin and parts being at the same time occupied by redness of a purple hue, together with great heat, a constant and most distressing itching, restlessness, pains of a lancinating nature in the side affected, thirst, and other febrile symptoms.

Shingles is a complaint not so frequently met with in adults advanced in years, as among youthful persons, and seems to attack girls oftener than boys. The appearances to be observed in it correspond in some measure with those we meet with in erysipelas; such as the inflamed parts having a dark purple aspect, and the vesicles being filled after a day or two with a limpid fluid; but still the two diseases are very distinct. Like the nettle rash, the shingles is attended with a very severe itching; but, in the former, it is felt universally over the whole body, whereas in the latter it is confined to those parts which surround, or are occupied by, the eruptions.

At the commencement, a slight febrile disposition prevails; there

is loss of appetite, considerable languor, slight rigors or shiverings succeeded by heat, a sense of fulness and soreness in the side about to be affected with the eruption, together with sharp pains darting through it and the chest. About the third day several patches of a purple redness are to be observed on the trunk of the body; they have elevated points on them, somewhat clustered together, forming at last vesicles of about the size of a pearl, that are filled with a fluid of a limpid colour. The surrounding parts are occupied by a sensation of heat and intolerable itching, and which indeed proves so incessant and distressing as to deprive the patient of all rest either by night or day.

Whilst the patches that appeared first keep enlarging, others shew themselves after a lapse of two or three days; and the whole occupy and extend in the generality of cases (as before observed) from the lower extremity of the breast bone one half round the body as far as the spine or bones of the back. Occasionally the eruptions extend completely round the body; and instances have occurred where they have occupied the space across the shoulders, somewhat similar to a sword-belt.

It is usual for the eruption to cease either in extending itself or multiplying after six or seven days: the vesicles then lose their transparency, by degrees acquire a livid colour, and ultimately sink into small brown scabs. These fall off in about a fortnight's time, leaving the skin underneath them of a dark brown colour, somewhat similar to those after the small pox.

The generality of cases of shingles prove of a slight nature, and are, therefore, unattended by danger; but occasionally the vesicles degenerate into extensive ulcerations, which it is found difficult to heal, and have been known in the end to prove fatal. It also sometimes happens that either by an exposure to cold, or the application of a repellent remedy, the eruptions suddenly recede, and the peccant matter is thrown back into the constitution, giving rise to many distressing ailments, such as spasmodic asthma, loss of appetite and flesh, great debility, and a most distressing tingling sensation and itching over the whole body. Sometimes the patient experiences a deep-seated pain in the side, to relieve which he finds it necessary to keep up a constant pressure against it with his hand.

In the treatment of shingles, moderate warmth will be advisable in the chamber of the sick; and with the view of determining the circulation to the surface of the body, some gentle diaphoretic medicine (see this Class, P. 1, 2, and 4,) may be taken every four or six hours; the patient drinking, at the same time, tepid diluent liquors, such as herb tea, barley water, &c. If the bowels are in a costive state, this should be obviated by giving a gentle aperient now and then. See the Class of Laxatives, P. 2 and 11.

Owing to the incessant and distressing itching which prevails in the shingles, the patient is in a constant state of irritation, and gets little or no sleep. To obviate the exhaustion produced thereby, it will be neccssary to give him some anodyne towards bed-time,

such as a grain of opium made into a pill with a little of the confection of roses, or about thirty drops of laudanum in a little mint water. To alleviate the soreness and pain in the parts occupied by the eruption, flannel cloths wrung out in a warm decoction of bruised poppy heads may be applied from time to time.

When the vesicles begin to break, a little fine starch or hair-powder may be sprinkled over them for the purpose of absorbing the fluid discharged from them; after which, the parts may be covered with fine lint spread with spermaceti ointment. As the eruption is evidently of a critical nature, and intended to remove some acrimonious humour from the constitution, we should be careful not to apply any thing of a repellent nature, such as the different preparations of lead, ignorant people being apt to employ these for the purpose of allaying the severe itching which invariably attends the disease.

Should the eruption strike in suddenly, either by an exposure to cold or the employment of any improper application, our best endeavours must be exerted to reproduce its appearance. Here warm bathing and fomentations should be resorted to, giving at the same time medicines that will be likely to determine the circulation to the surface of the body; (See Class of Diaphoretics, P. 6 and 7.) and these may be repeated every four or six hours. If these means fail in producing the desired effect, a blister should be applied to the side which was affected, and be kept discharging for several days, by dressing with the ointment of cantharides.

OF THE NETTLE RASH AND PRICKLY HEAT.

The first of these diseases is characterized by an eruption over different parts of the body, resembling that produced by the stinging of nettles, whence its name is derived.

Little elevations appear suddenly, particularly if the skin be rubbed or scratched; they seldom, however, remain stationary for many hours, but vanish, and again make their appearance in some other part. It not unfrequently happens that a considerable swelling accompanies the eruptions, and now and then long weals, as if the part had been struck with a whip, are to observed. The eminences always appear solid, not having any cavity, or head containing a fluid. Intolerable itching invariably attends the eruptions, which frequently disappear in the day-time, and again break out in the evening, accompanied by some slight febrile disposition, such as heat, and an accelerated pulse. In some persons the disease continues for only two or three days; in others for some months, appearing and disappearing at intervals. It generally terminates in the cuticle peeling off in branny scales. It is not unusual for the stomach to be somewhat disordered previous to the first appearance of the eruption; hence mechanical irritation has been assigned as the cause of it.

The disease is of so mild a nature as seldom to require the use

of medicine, generally giving way to a cooling and light regimen. If necessary this may be assisted by some gentle aperient (see the Class of Laxatives, P. 5 or 7,) given occasionally. Where it proves obstinate, small doses of calomel (submuriate of mercury) may be administered. See the Class of Alteratives, P. 3 and 4. If these fail, we may advise about ten or twelve drops of diluted sulphuric or nitrous acid, to be taken twice or thrice a day in a tea-cup-full of a decoction of sarsaparilla. See the same Class, P. 12 or 13.

Prickly heat is a complaint of very frequent occurrence in warm climates, and particularly among Europeans soon after their arrival. It is characterized by an eruption of innumerable small pimples, dispersed over the whole of the body, attended by a severe itching and much temporary uneasiness.

The aid of medicine is seldom required in this complaint; but should the patient feel hot and feverish, or his bowels be confined, he may take some gentle aperient (see Class of Laxatives, P. 12 and 13), and after its operation has ceased, he may resort to a use of the saline mixture combined with nitre as in P. 5th of the Class of Antiphlogistics.

OF THE ERYSIPELAS OR ST. ANTHONY'S FIRE.

This eruptive disease is accompanied by a superficial inflammation, confined sometimes to a particular part of the body, and at others more generally diffused, not unfrequently occupying the face and head, and being then accompanied by a high degree of fever and delirium. Infants are liable to a particular species of this inflammatory affection.

Erysipelas is usually preceded by cold shiverings and other febrile symptoms, such as pains in the head and back, restlessness, loss of strength, thirst, nausea, vomiting, and a quick, hard, strong, or small pulse, according as the fever may incline to the inflammatory or typhous kind. About the second or third day, the skin of the affected part becomes inflamed, be it the foot, breast, or face; soon after which an efflorescence appears of a florid red colour and shining appearance, being at first of no great size, but spreading gradually, and at length occupying a considerable extent of surface. There is a peculiarly acrid heat in the inflamed parts with much swelling.

When it attacks the face, this swells, appears very red, the eye-lids are frequently puffed up and closed, the whole scalp of the head becomes affected, the fever runs high, there is a confusion of ideas, and not unfrequently some delirium: now and then there is a difficulty of breathing.

After a time, blisters of larger or smaller sizes commonly appear, containing a clear watery fluid, of so acrid a nature as to inflame the skin of the part over which it is discharged. The surface of the skin in the blistered places is sometimes of a dark or livid co-

lour, but this seldom goes beyond the surface, and generally disappears with the other symptoms. The inflammation usually continues for eight or ten days, with the fever and other symptoms. In the progress of the complaint, the delirium or stupor sometimes goes on increasing, and the patient expires about the ninth or eleventh day of the disease ; but if not, the inflammation, after having affected a part, commonly the whole of the face, and in some cases perhaps the internal parts of the head, ceases, as does also the fever ; the diseased scarf-skin falling off from time to time in branny scales.

When erysipelas seizes the foot or hand, the neighbouring parts swell, and the skin assumes a shining appearance of a deep red ; and if the pain be very great, it will extend upwards to some distance.

Causes.—Persons of a full habit are most liable to attacks of this disease ; but it is often met with in young people and pregnant women ; and such as have once been afflicted with it seem much predisposed to its returns. Every part of the body is liable to be attacked by it, but it more frequently seizes the legs and face, particularly the latter.

Vicissitudes of the weather, exposure of the body to cold when much heated by previous exercise, the abuse of fermented liquors, the presence of irritating matters in the bowels and stomach (more especially of acrid bile), and suppressed evacuations, inducing fulness of blood, are to be looked upon as the principal exciting causes of erysipelas.

Unless where the disease occupies the face, and then extends to the interior of the head, it seldom proves fatal. We may regard the following appearances as favourable. The fever being purely of an inflammatory nature ; the eruption of a bright red or scarlet colour, not extending over a large surface ; the fever diminishing upon the appearance of the efflorescence, and this soon after assuming a yellowish hue, with an abatement of the swelling ; there being no vesications.

The unfavourable appearances are, the fever assuming a typhous tendency ; its being protracted to the ninth or eleventh day, with an increase of the propensity to sleep, stupor, or delirium ; the inflammation assuming a livid colour ; its suddenly receding from the surface and fixing on an internal part ; purple vesications, great depression, or loss of strength, a weak rapid irregular pulse ; the early coming on of stupor or delirium ; the disease prevailing epidemically ; the constitution of the patient being originally weak or emaciated by previous illness, or the person far advanced in life. It is also an unfavourable circumstance when the disease is combined with jaundice, dropsy, or other affections, originating in a vitated or diseased organ.

Treatment and Regimen.—Great care and attention are required in the management of erysipelas, so as not to reduce the fever by immoderate evacuation, if it is of a typhous nature, which is apt

to be the case after a time, although it is more usually attended at its commencement by a fever purely of the inflammatory kind.

If the accompanying fever is of this last description (see Inflammatory Fever), and runs high, the pulse strong and hard, the patient vigorous, or the head much occupied by stupor or delirium, it will be advisable to bleed, proportioning the quantity of blood drawn off to these circumstances; but in the common milder sort of erysipelas, bleeding will not be necessary.

In all cases it will be proper to keep the bowels open by gentle laxatives; but it will be more particularly so, where the disease occupies the head, either from being translated from the extremities, or its being the original seat of the inflammation and swelling. There is not, perhaps, any acute distemper which admits of active Purgatives (See this Class, P. 1 and 4) more freely than this when the swelling has seized the face and head.

Under the same circumstances, bathing the feet and legs in lukewarm water will be likely to prove a good auxiliary remedy. If these means do not relieve the stupor or delirium, a large blister ought to be applied to the upper part of the neck, and stimulant cataplasms to the soles of the feet. See the Class of Stimulants, P. 13. It may also be advisable to have the head shaved, and to apply a fine towel wetted with cold water and vinegar over it, in the same way that is recommended in phrenzy.

To assist in obviating or removing the tendency to a determination of the disease to the head, or other important organs, we should promote a free perspiration, and the medicines best adapted to this purpose are small and frequently repeated doses of tartarized antimony combined with a solution of the acetate of ammonia and camphor. See the Class of Diaphoreties, P. 6, 7, and 9.

Tepid diluting liquors may be drank freely at the same time. If the thirst is great, it is to be abated by the patients drinking lemonade, tamarinds dissolved in water, or a thin decoction of barley gently acidulated with orange or lemon juice.

Some physicians have objected to the use of cold applications in erysipelas, but I think undeservedly, for I have adopted them in many instances with marked and decided advantage; and what I have generally used on these occasions was a lotion consisting of two parts of the solution of acetate of ammonia, and four of water, with an addition of an ounce of camphorated spirit. To obviate all objections, however, the lotion may be made of a tepid heat, and thus be applied to the part by means of soft linen cloths dipped in it, taking care to re-wet them from time to time.

Where little blisters, or vesicles arise on the inflamed parts, it has been usual to apply some dry mealy powder to absorb the acrid fluid contained in them when they break; for this purpose starch, chalk, or oatmeal are generally employed.

Erysipelatous inflammation seldom or never terminates in a suppuration, or abscess, but occasionally it assumes a gangrenous tendency, in which case we should immediately resort to the Peruvian

bark, or sulphate of quinine, opium, mineral acids, and wine, as recommended under the head of putrid fever.

The parts are, at the same time, to be well fomented with a strong decoction of the bark mixed with camphorated spirit, afterwards covering them over with a cataplasm, or poultice of an antiputrescent nature. See the Class of Antiseptics, P. 14, 17, and 18.

Where the symptoms which at first were marked by an inflammatory character, degenerate towards the close into those of a typhoid nature, we must then adopt the remedies recommended in the cure of typhus.

From what has been said in laying down the treatment of erysipelas, it will be perceived that this must vary according to the character of the fever with which it is attended. If it be well marked as inflammatory, which is not often the case, the frequent exhibition of purgatives, with the other means of diminishing inflammation, are to be resorted to. (See Inflammatory Fever.) If, on the other hand, it possesses the character of typhus, Peruvian bark, wine, mineral acids, and other remedies of the strengthening kind, enumerated under the head of this species of fever, are to be substituted. See Typhus.

In common cases of erysipelas, the diet ought to be slender and light, supporting the patient's strength with weak broths, and preparations of barley, panado, arrow root, &c. avoiding meat, fish, spices, and every species of fermented liquor. For ordinary drink, lemonade, acidulated soda water, or barley water, may be used. But where the accompanying fever is of the typhous kind, the spirits sunk, and the pulse low, he may be allowed wine properly diluted, as in the form of negus. His food may be nourishing broths, preparations of sago, or Indian arrow root, &c. mixed with wine. These may be taken in small quantities, and be often repeated. Some caution will, however, be necessary not to aggravate the disease by too free a use of wine.

OF THE PLAGUE.

It has not been usual to introduce this disease into Works on Domestic Medicine, but as this is partly intended for instructing the inhabitants of warm climates where the plague is apt to arise, as well as the masters of ships trading to suspected ports, I have judged it proper to notice it for their benefit.

The plague is characterized by typhus of a highly contagious nature, accompanied by great and sudden loss of strength, buboes, carbuncles, a discharge of blood from different outlets of the body, livid spots dispersed over various parts of it, and often a severe purging, which rapidly exhausts the patient's strength.

Symptoms.—In some instances of the plague, the energy of the brain and nervous system is much impaired, as is evident by a slow, drawling, and interrupted utterance of speech. and stupor: the

tongue is white but not coated with fur, the countenance is pale, the stomach extremely irritable, the strength much diminished, and there is great anxiety. There are also pains in the back with shiverings.

In other cases, there are evident signs of a high degree of excitement of the brain; the pain in the head is intense, thirst great, countenance flushed, and utterance somewhat hurried. The attack is ushered in by shiverings and pains in the back, glandular swellings then make their appearance in a slow manner, and these recede again without having produced any remission of the symptoms. Occasionally carbuncles (inflammatory tumours) arise on different parts of the body, and these soon mortify. A high degree of delirium prevails, and the patient is destroyed in the course of two or three days, or perhaps he lingers on without any signs of amendment until the seventh day, and then perishes.

Some cases occur wherein the attacks are marked by symptoms of a similar nature with those above, but are of a much milder nature, the brain being comparatively but little affected. The glandular swellings, or buboes, which make their appearance, go on more kindly and rapidly to suppuration, and by an early and prompt employment of remedies to assist the salutary operations of nature, there will be a tolerable chance of the patient surviving the disease. Cases of this latter kind are sometimes so mild that persons thus infected have been known to walk about seemingly in good health, and without any evident inconvenience from the buboes.

The worst forms of the disease are always accompanied with the usual symptoms of malignity and putrescency, as are pointed out under the head of Malignant and Putrid Fever.

These varieties of the plague seem to depend much on the state of the atmosphere at the period when it prevails epidemically, as likewise on the habit of body at the time of the attack.

Causes.—In all cases of the plague prevailing epidemically, anxiety and terror, hurry and fatigue, anger, filth, defective nutriment, and intemperance of every description, have acted as predisposing and accelerating causes of the distemper. Regularity and calmness under difficulties, careful and frequent ablutions of the body, a full and rather generous diet under the guidance of temperance in every thing, together with the spirit of benevolence and piety, are perhaps the best antidotes to the disease. It arises most usually from contagion of a specific nature, which is propagated from one person to another by close association, or by coming near materials infected by it. Some go so far as to deny that the disease is communicable by an atmosphere strongly tainted with pestilential vapours, or particles arising from persons labouring under it, or from substances tainted therewith, and that it is only to be communicated by immediate contact; but this idea appears to be erroneous. In those countries where the plague is most prevalent, certain causes, it is supposed, tend to give rise to it besides contagion, viz. noxious exhalations arising from stagnant waters or slimy

mud, a want of proper cleanliness, confined and contaminated air, and a use of damaged grain, putrid fish, or other substances. A moist or humid state of the atmosphere has been observed to be favourable to the production of the plague, and it has also been noticed to prevail in a greater degree, and to put on a more formidable appearance, during the continuance of South winds than during those from the North and North-East.

The disease in question is usually accompanied by imminent danger, and at least one third of the persons who are attacked with it are deprived of life. It is seldom that any patient recovers, even under the best treatment, when the plague is ushered in by fever and delirium. When it is unattended by glandular swellings, it runs its course more rapidly than when accompanied by such affections, and they proceed on readily to suppuration. If carbuncles arise and show a disposition to mortification, the event will be fatal; purple or livid spots interspersed over the body, involuntary discharges of blood, and a severe purging, are also to be considered as mortal symptoms.

When the fever does not occur until the second day from the attack of the disease, the danger will be diminished, as time is thereby given to obviate the consequent symptoms. The earlier that buboes appear, the milder usually is the disease, and when they proceed kindly to suppuration, or form proper matter within them, they, in general, prove critical, and seem to preserve life.

The duration of the disease is various; for the extinction of life almost immediately happens in some instances; in others the patient has survived but a few hours after the first sensation of illness; and again, in a few cases he has lived until the twelfth or thirteenth day.

Treatment and Regimen.—If nausea or vomiting takes place on an attack of the plague, it may be advisable to clear the stomach of acrid matter by administering a gentle emetic of about twenty grains of the powder of Ipecacuanha. Should the irritability of the stomach continue after the operation of the emetic is over, it possibly may be relieved by giving the saline medicine in a state of effervescence, (see the Class of Stomachics, P. 1 and 2,) adding about six or eight drops of the tincture of opium to each dose.

For the purpose of dislodging any feculent matter which may be contained in the bowels, it will be proper to give some gentle aperient medicine. See the Class of Laxatives, P. 11, 12, or 13. At an advanced period of the disease, it will be most advisable to remove costiveness, if present, by emollient and aperient clysters, lest we should excite purging, which is apt to destroy the patient when it even arises spontaneously towards an advanced stage.

The next step to be taken is to subject the patient to affusion with cold water, as recommended under the head of malignant and putrid fever, (see this) repeating the operation three or four times in the course of the twenty-four hours. He is at the same

time to avoid a warm bed, and, indeed, if he possibly can, a bed altogether. His clothing is to be very light, his apartment well ventilated by allowing a free circulation of cool fresh air into it, the strictest attention to be paid to cleanliness in every respect, and cooling drinks, particularly cold water acidulated with lemon juice, to be given from time to time.

Where affusion cannot be resorted to, either from the state of the patient, or the prejudices of himself or others about him, we must be content with sponging the body very frequently with vinegar or lemon juice diluted with cold water.

With the view of obviating the extreme debility which always takes place in the plague, and preventing the disposition to putrescency, both vegetable and mineral acids may be freely made use of, as recommended under the head of Malignant Fever. Where a crisis, or change of symptoms takes place, indicating a recovery, or any evident remissions in the disease, the Peruvian bark may be given in as large doses as the stomach will bear, with an addition of ten or twelve drops of muriatic or nitric acid to each dose, which ought to be repeated every two or three hours.

To allay irritation and procure sleep, opium may be employed, (See the Class of Anodynes, P. 5 and 6) ; and as camphor is a medicine highly spoken of in the plague, it may be conjoined as in the latter Prescription here referred to.

When a purging occurs, either spontaneously or from an improper use of laxative medicines, it should be stopped as quickly as possible by astringent medicines. See this Class, P. 5 and 6.

Drawing blood in this disease, even at its first attack, is of a dubious nature with regard to its effects; some physicians recommending it, others again highly disapproving of it,—the first looking on the plague as an inflammatory affection ; the latter, as a disease of direct and excessive debility.

Where buboes appear at an early period, they should be brought forward to suppuration as quickly as possible by emollient poultices, (such as the common one composed of bread, milk, and a little lard or sweet oil), kept constantly applied to them. When they break, or are opened to discharge their contents, they are to be dressed with fine lint spread with yellow basilicon ointment.

The diet of the patient should be generous and nutritive in all cases of the plague.

With the view of rendering the plague a milder disease than when taken in the natural way, inoculation has been made trial of in a few instances; but fatal consequences have always attended the operation when the poison took effect in consequence of being thus introduced.

The proper steps to be adopted for the prevention of the disease being further extended and communicated to others, in places where it makes its appearance, are fully pointed out under the head of Means to prevent the Extension of Infectious Diseases.

OF INFLAMMATIONS.

Every species of inflammation seems to be owing to an increased action of the blood vessels, pushing forward a greater portion of blood into the part affected, than what takes place in its healthy state, by which means pain is excited therein, its vessels distended beyond what is natural, and the circulation through them rendered more rapid.

There are two kinds of inflammation, viz. the one of a bright red colour with a throbbing and pointed tumour, tending to suppuration and giving rise to an abscess, acknowledged by professional men, under the term of phlegmon: the other being of a mixed red colour, with hardly any evident swelling, readily disappearing upon pressure with the fingers; but quickly returning again, the redness being of no regular circumscription, but spreading unequally, and accompanied with a pungent pain, like to what takes place from a burn, terminating usually in a falling off of the scarf-skin in branny scales, and occasionally in a mortification of the part, but never in the formation of abscess, unless where the two species of inflammation are combined, which rarely happens. This second kind of inflammation is known to the Profession under the name of erysipelas, and will be found fully treated of among the eruptive fevers, as being one of their number.

The constitution in which inflammatory diseases most usually occur, and in which we ought to have recourse to antiphlogistic means as long as the system continues vigorous, is thus characterized. The person possessing such a constitution has a healthy appearance, his countenance is ruddy, his muscular fibres are firm, and he is capable of great exertion, and of continuing it for a length of time without intermission. In this constitution the powers of the system, however much exhausted, are quickly renewed by food and rest, even in a moderate quantity; and it is further characterized in the equally diffused action which occurs when a stimulus is taken, no part being more excited than the others. If by any accident a local inflammation is induced in this habit, it often terminates rapidly in healthy suppuration.

OF PHLEGMONOUS INFLAMMATION AND ABSCESS.

This species of inflammation is chiefly seated in the true scarf-skin, and surrounding cellular substance, at first; but afterwards extends to the adjoining parts, the surface becoming of a bright red colour, and being swelled.

At the commencement, there is a dryness and itching, with redness and increased heat, and accelerated circulation of blood in the part affected, together with a throbbing sensation. Where the inflammation is extensive and runs high, many febrile symptoms ensue, the skin over the whole body becomes very hot and dry, there is great thirst, and the pulse is quick, full, and hard. If pro-

per means are not promptly adopted to counteract the inflammation, it sooner or later terminates either in suppuration and an abscess, or in a mortification of the parts. Where glands are occupied by inflammation, and do not suppurate, they are apt to become hard and knotty, known under the appellation of scirrhus. If the inflammation is not very great, and proper remedies are resorted to at an early period, it very frequently happens that all the symptoms gradually subside without further consequences, and what is denominated resolution then ensues, by which is to be understood a dispersion of the tumour.

There is a circumstance however in the history of inflammations which has hardly received a due attention, but it is both sufficiently remarkable and somewhat important, namely, the original disposition to terminate in one mode rather than another: thus, in a boil or witlow it is to suppurate; in carbuncle to slough; and in mumps to resolve; and this disposition is so strong, that it is very difficult to procure any other termination. It may happen, however, that there shall be more than one mode in which it is disposed to terminate, as in either resolution, or suppuration, in gangrene, or ulceration, and so on.

Causes.— Phlegmonous inflammation is occasioned by the application of cold, or by that of stimulants, and external injuries, such as bruises, wounds, &c.; in short, by every thing that produces an increased circulation in the part.

The judgment which is to be formed with respect to the event of this species of inflammation, must be drawn from the symptoms which are present, giving due consideration at the same time to the seat of the disease. A gradual abatement of the inflammatory appearances by a termination in a dispersion of the tumour, denotes a favourable event. Where suppuration ensues, and proper matter is formed in the abscess, and this does not occupy an internal part, but is seated externally, the termination in all probability will also be favourable if the patient enjoys a sound constitution. On the contrary, when the inflammatory appearances subside suddenly, or blisters arise, which discharge a thin acrid fluid, and the part assumes a livid colour, and loses all sense of feeling in it, a mortification will soon ensue, which is ever to be looked upon as highly dangerous.

Treatment and Regimen.—In every case of phlegmonous inflammation, not of a critical nature, it will be advisable to carry it off, and disperse the swelling, if possible, by adopting suitable means at the commencement of the disease. If it has arisen from any external cause, such as a bruise or wound, the parts should be properly examined and cleansed of all extraneous and irritating substances, and then be well fomented with a warm decoction of bruised poppy heads and marsh-mallow leaves. See the Class of Emollients, P. 4. This being done, we may apply a cold poultice of rye meal or crumb of bread, moistened with a solution of the acetate of lead diluted with water, in the proportion of sixty drops

of the former to a pint of the latter. Should this application prove either painful or inconvenient, linen cloths well wetted with some discutient wash (see the Class of Discutients, P. 1, 2, and 3.) may be substituted, and these be kept constantly over the parts, taking care to re-wet them from time to time, when they become dry and hard.

To assist these means in procuring a dispersion of the swelling and inflammation, several leeches may be applied in the immediate vicinity of the part affected, allowing the wounds made by them to bleed freely after they drop off, by bathing them with a sponge wrung out in warm water. With the like view, it may be right to give the patient some medicine that will act smartly on his bowels. See the Class of Purgatives, P. 1 and 4.

Where the inflammation is accompanied by constitutional symptoms, denoting a high degree of febrile action throughout the whole system, such as intense heat, great thirst, and a full, or hard, quick pulse, it will be advisable to draw blood from the arm, besides abstracting it by leeches from the part peculiarly affected, proportioning the quantity that is taken away to the age and habit of the patient as well as to the violence of the symptoms. The purgative medicine should be repeated every other day, as long as we have any hope of dispersing the tumour and inflammation, and several more leeches may again be applied on or round the inflamed part. These means ought to be assisted by confining the patient to a very slender or spare diet at the same time.

But if, notwithstanding this treatment, the tumour becomes larger, with increased pain and pulsation in it, denoting the formation of matter, all evacuations must be laid aside, and the suppuration be encouraged by an emollient poultice, composed of the crumb of bread and sweet oil, kept constantly applied to it, taking care to renew it at least every morning and night. To quicken its action, the tumour may be well fomented between the times of applying the poultice, with flannel cloths wrung out of a warm decoction of marsh-mallows and chamomile flowers. See the Class of Emollients, P. 2.

As soon as the abscess is properly formed and in a fit condition to be opened, (which is marked by an abatement of the pain, the skin in the most prominent part becoming thin, and a fluctuation of the matter being perceived on pressure with the fingers), a lancet should be applied to it for the purpose of discharging its contents, which plan will be preferable to allowing the abscess to break of itself. The wound may be poulticed for a day or two afterwards, and then be dressed with dry lint, having a pledget spread with resin cerate (yellow basilicon) laid over all. Should any red granulated flesh sprout up, and rise beyond the edges of the surrounding skin, it should be touched with the sulphate of copper (blue vitriol,) or red precipitate.

If after opening the abscess, there should be discharged a thin acrid matter, instead of a whitish, bland cream-like fluid, we should

administer the Peruvian bark in doses of a drachm every three or four hours, with the view of promoting a kindly suppuration, and facilitating the healing of the sore. Should this medicine disagree with the patient's stomach, the sulphate of quinine, as prescribed in Intermittents, may be substituted. A generous nutritive diet, with a moderate allowance of wine, will greatly assist the effects of the bark and quinine.

The last termination of inflammation which is here to be noticed, is in mortification or gangrene, as the treatment of scirrhus will be pointed out under the head of Cancers. This termination is to be known by the inflammation losing its redness, and becoming of a purple or livid colour, the distention of the skin going off, and little bladders filled with a thin acrid fluid of different colours dispersed all over the surface of the part. When this becomes black and destitute of natural heat and sensation, the pulse sinks, and death soon follows.

Whenever there is reason to apprehend a termination in gangrene or mortification, we should endeavour to resist it by giving energy to the system, by a liberal use of the bark, assisted by a nutritive diet, and wine. After it has become apparent, these remedies are doubly requisite, and here the bark should be given in as large doses as the stomach will bear, and these be frequently repeated. Swallowing, however, a large dose of bark in substance is apt to give, in some instances, a disgust to the patient, and to derange his stomach so as to render it necessary to desist from its use. In such cases, the sulphate of quinine is a valuable medicine, and may be given to adults in the dose of five grains made into two pills, with about four grains of the extract of gentian, and be repeated every four or six hours; or it may be taken in the form of a draught, as in the P. 27, Class of Tonics. For younger persons and children, the dose of course should be reduced. Where much pain has accompanied the inflammation, as is often the case in contused wounds, it may be advisable to allay this by small doses of opium given from time to time: say about fifteen drops of its tincture twice or thrice a day.

With regard to external applications, it will be best to foment the parts, morning and evening, for a quarter of an hour each time, with what is prescribed under the head of Antiseptics, P. 17 or 18; after which the Cataplasm, P. 14, is to be applied. Medical men seem at variance as to whether the external applications over gangrenous parts ought to be hot or cold, and therefore it may be advisable to pursue the middle course, and make them only of a gentle tepid heat. In a few instances, the progress of mortification has been checked, and the offensive stench arising from the diseased part removed by sprinkling it over with a little fresh charcoal, very finely pounded, or by washing it with nitre dissolved in water, in the proportion of one drachm of the former to a pint of the latter.

Where debility exists, a slight stimulus may be employed with

advantage ; but where there is excessive action every stimulus must be avoided. To check the progress of gangrene, and produce a slight stimulus, one of the best applications we can employ, and which has been strongly recommended by Sir Astley Cooper, is nitric acid sufficiently diluted with water. About fifty drops to a quart of water will be found a very useful remedy. A short time after the application of this, a quick separation of the parts from sloughing will generally be observed, and healthy granulations will spring up of a beautiful florid red. To prevent evaporation and preserve the moisture of the linen wetted with the lotion, oiled silk should be applied over the diseased part. By a use of the nitric acid in this way, the offensive smell proceeding from the wound is greatly lessened.

Port wine, porter, dregs of beer, and yeast, made into a poultice, are also useful ; as is likewise a cataplasm of boiled carrots mashed. These may be tried one after another in case of failure. The local applications must be aided by constitutional remedies, such as the bark and sulphate of quinine, as before mentioned, together with a nutritive diet, port wine, and spirits to those who have accustomed themselves to such liquors. Twenty drops of tincture of opium, with ten grains of the subcarbonate of ammonia in an ounce and a half of camphor mixture, and a little compound tincture of cardamoms, will be a valuable medicine, and may be repeated three times a day.

If the gangrenous parts separate from the sound, and slough off, the wound is then to be dressed with very dry lint, having a pledget spread with resin cerate laid over all. Should this ointment not prove sufficiently digestive, a little oil of turpentine may be added to it over a fire.

In hospitals, where the air is much corrupted by the putrid vapours arising from many persons labouring under wounds or ulcers, what is termed hospital gangrene is apt to become pretty general. In such cases, acids appear to be the best applications, and of these the acetous holds the first rank ; next stands the oxygenated and common muriatic acid, sulphuric and nitric acids ; and in the last place, the other strong vegetable acids. The acid is to be applied by fine lint, dipped in it, to the whole surface of the sore.

OF BOILS, AND WHITLOES.

Both of these are the consequences of previous inflammation, and ought, if possible, to be discussed, or prevented from suppurating ; but when proper means for affecting this have been neglected, or prove inefficacious, and matter is formed, the suppuration should be expedited, and the matter discharged, by opening the tumour with a lancet, when it is sufficiently soft, dressing the wound afterwards with lint and the resin cerate.

OF CARBUNCLE.

The peculiar characteristic of carbunculous inflammation is its strong and almost irresistible disposition to terminate more or less in the sloughing process, and in the purulent matter produced being of the worst description and most irritating quality.

Carbuncle occurs, in most instances, in persons who have lived grossly and irregularly, and whose digestive organs are loaded and much disordered, but may be the attendant of some local injurious cause. In all cases there is a strong tendency to a sinking of the nervous powers, which, when sloughs are formed, often takes place very suddenly and to a great degree. A hurried, uneasy, and depressed state of the nervous system are manifested by tremors, a tendency to delirium, and an anxious countenance. The disorder of the digestive organs is evinced by the furred tongue, the nausea, foul discharges, and headach. Carbuncle always proves fatal when it takes place on the head, and very frequently so when the neck is the seat of the disease.

Treatment.—In all cases the patient must be supported according to his want of power; and if we can keep him up till the sloughs form and separate, in all probability the event will be favourable. According, therefore, to the necessity, it will be proper to see that he is supplied with such articles of food and drink as may appear most advantageous; and in the advanced stage of the disorder it frequently becomes necessary to push this plan pretty far by a liberal allowance of wine.

It is moreover of great consequence to employ a suitable local treatment, as on this the life of the patient will greatly depend. It is rarely possible to prevent carbunculous tumours from going into suppuration; and therefore it should be an object kept in view, to promote this process by warm fomentation and poultices, which in some cases it is serviceable to make the former with stimulating fluids; for this kind of inflammation is attended with great defect of nervous energy in the parts. Evaporating lotions, and discutient poultices, would therefore be highly improper; and the most appropriate will be tepid fomentations with a strong decoction of Peruvian bark and bruised poppy heads, with the application of digestive poultices and dressings.

As medicines administered internally, none are so appropriate as the chinchona bark joined with some mineral acid; and therefore about a drachm of the former in powder, conjoined with eight or ten drops of muriatic acid, may be taken every two or three hours, mixed in a little wine somewhat diluted with water. Should the patient become disgusted with the remedy proposed, or his stomach nauseate it, the sulphate of quinine may prove a valuable substitute, and can be given in the dose of five grains made into two pills to adults every six hours, and to younger subjects in the like proportion. If the form of a draught is preferred, we may substitute P. 27, Class of Tonics.

The patient's strength and powers of life must be properly supported with as much nutritive food as his stomach will bear, together with wine, porter, &c.

OF THE GUINEA WORM.

This very singular affection consists in inflammatory tumours, which after a time proceed very slowly to suppurate ; and it takes its name from being so commonly met with in Guinea and other parts of the coast of Africa, but not unfrequently, sailors who have been on board of vessels trading thereto, return from thence to other countries severely suffering under the malady. It is said to be likewise prevalent in that part of the Indian shore which is in the neighbourhood of Bombay, particularly during the rainy season of the year.

The Guinea worm is of the small round kind, thin and long, somewhat resembling the string of a violin, being of a white colour all over except the head, which is black, that inserts itself into different parts of the human body, immediately between the cellular membrane and flesh. It is, however, more generally met with in the arms, legs, and thighs than other places ; and not unfrequently is found of the length of twelve or fourteen inches.

Causes.—A few have attributed the origin of these worms so deposited in the human body, to the drinking or bathing in the waters of stagnant pools or wells where the little insects or animals, in an embryo state, float about in a manner similar to what musquitoes do ; but a more probable way of accounting for their production is by supposing that in a very minute state, similar to the insect called the chigre, they penetrate the skin of persons who are lightly clothed ; because those who are sufficiently clad, and wear stockings and garters, or trowsers and boots, are rarely, if ever, attacked ; and hence it happens that common seamen are very liable to be afflicted with this species of worm in their extremities, whilst their officers, whose arms and legs are well defended against them, seldom or never are infested with them.

The complaint by no means appears to be of an infectious or contagious nature ; but several persons being exposed to the same cause, may become diseased, and give rise to the supposition that it is possible to be propagated by personal communication.

Symptoms.—The Guinea worm becomes perceptible at first by an unusual itching in the part where the insect has insinuated itself ; and, on inspecting it narrowly, a small vesicle or bladder may often be perceived. It is, however, not attended with any acute pain until it obtains a state of maturity ; at which period, the part in which it has lodged becomes swelled, inflamed, and highly painful to the touch, and very much resembles a boil which is not kindly disposed to form matter, or suppurate. The tumour having remained for some length of time in this indolent state, does, however, suppurate, and at last breaks, when the black head of the

worm may be seen protruded from the orifice of the abscess; and by its pushing forward a little every day, may at last be laid hold of with tolerable ease.

There is frequently a considerable degree of fever present when the inflammation runs high in the tumour; but no injurious consequences result from it if the complaint is properly treated. When, however, too great a hurry to extract the worm is adopted, it is occasionally broken, and an ill-conditioned sore or ulcer is then apt to be formed, as well as other abscesses, in the parts which are contiguous. After extracting one worm from a patient a second, third, or fourth will appear in some cases; and after taking one from the leg, another will make its appearance in one or both arms, or perhaps in the other inferior extremity.

Treatment.—Mercurial ointment has been rubbed in over the parts affected with the worm by some surgeons, under the hope of destroying it and dispersing the tumour, but, in general, without any good effect. The best way of proceeding will be to foment it well morning and night, and keep an emollient poultice of bread, milk, and sweet oil or lard constantly applied to the tumour, renewing it twice a day until it breaks. When this happens, and the head of the worm is so far protruded as that it can be laid hold of readily, a piece of cotton rolled up in the shape of a quill is then to be fastened to it, and each day as it advances, it is to be twisted gently round the cotton, until the whole of the worm is extracted; using at the same time the greatest precaution that it be not broken. The wound is then to be dressed daily with a little lint, covering all with a pledget of tow spread with some digestive ointment, such as the resin cerate.

When the inflammatory symptoms run high, and are accompanied by much febrile heat and thirst, it will be advisable to open the bowels freely by some cooling laxative medicine every second or third morning, giving on the intervening days the saline mixture with the nitrate of potash (See the Class of Antiphlogistics, P. 4.) in doses of three table-spoonsful every four hours; but otherwise, an internal use of medicine will not be requisite.

The disease having been thought to be capable of extending from those afflicted with it to others not so from a neglect of due cleanliness, free ventilation, frequent washings, and fumigations had best be employed in all situations where it makes its appearance.

OF INFLAMMATION OF THE BRAIN, OR PHRENZY.

This disease is marked by severe pains in the head, redness of the face and eyes, incapability of bearing the light or any noise, great watchfulness, constant and high degree of delirium, a quick, hard, full pulse, and an acute continued fever.

The disorder is sometimes a primary affection, but more frequently it is only a symptom of some other malady, such as inflammatory fever, &c. It is, however, not an uncommon disease in

warm climates, owing to an exposure to the intense rays of the sun under a state of intoxication.

Symptoms.—Inflammation of the brain, or its membranes, is usually ushered in with frightful dreams, great anxiety, excruciating pains in the head, a peculiarly wild expression of countenance, constant watching, extreme sensibility to impressions of light and sound, loss of memory, and a sense of horror. The face then becomes red and flushed, the eyes have a staring appearance, and seem as if starting from the sockets, the skin is dry and burning, the tongue parched; at first of a fiery red colour, and afterwards becoming black or of a dark yellow; there is a small rapid and hard pulse, and a ferocious delirium; sometimes on dozing, the patient mutters a great deal, his hands tremble, and his fingers are in almost constant motion, either picking at the bed clothes, or gathering something apparently.

After the fourth day, the delirium is more furious and continual, or the disease terminates in stupor and insensibility: if protracted, in great prostration of strength, an involuntary discharge of urine and stools, hiccups, and at length, in the cessation of life.

Causes.—An abuse of spirituous liquors, violent exercise, stimulant passions of the mind, close and intense study, exposure to excessive heats, or to vicissitudes of temperature, subjecting the head uncovered to the rays of a vertical sun, external violence, and the sudden suppression of accustomed evacuations (such as the bleeding piles in men, and the customary discharges monthly in women), are the causes which usually produce phrenzy.

It may be distinguished from insanity by its being accompanied with violent fever; the other not; and by the speedy termination of the one, and longer duration of the other. It is readily to be distinguished from the delirium which accompanies inflammatory fever, because in phrenzy, the delirium is the primary affection, whereas in the other, it is consequent on the general fever. In inflammatory fever, the pulse is strong and full; in phrenzy, small, hard, and more rapid; moreover, the latter, when protracted, terminates in symptoms of the typhous kind, and occasionally in insanity; but true inflammatory fever, under the like circumstances, most frequently in inflammation of the bowels, or some other internal organ.

Inflammation of the brain or its membranes, is always to be considered as a very dangerous disease, whether it is primary or symptomatic, and when long protracted, is apt now and then to terminate in insanity. In children, an effusion of water between the membranes of the brain, or in its cavities, is very apt to take place. The following appearances are to be looked upon in a favourable light. The pulse diminishing in frequency, and becoming more full and soft; the skin, from being dry and contracted, having an agreeable and warm perspiration diffused over it; the urine becoming cloudy and depositing a sediment, a return of consciousness and sleep, a gentle purging ensuing, or a discharge of blood from the nose taking place.

The unfavourable appearances are profound insensibility, the face from being flushed suddenly becoming pale; after constant watching and ferocious delirium the pupils of the eyes being dilated, grinding of the teeth, tremors, convulsions, suppression of urine, startings of the tendons, involuntary evacuations, profuse sweating without affording relief, and the delirium changing to stupor, while at the same time the pulse becomes weaker.

Treatment and Regimen.—The most powerful remedies should be employed at the very commencement of the disease, as it is apt to prove fatal in a very few days. Our attention ought therefore to be directed to the diminution of the quantity of blood in the whole system, but particularly in the head, as quickly as possible; and with this view, a copious and sudden abstraction of blood should be made from the temporal artery or jugular vein, if it can be done; but if not, from the arm, making the orifice of the wound large, that the blood may flow rapidly as well as readily. If the patient is of a stout and robust habit of body, it will be best to continue the flowing of the blood until he becomes faint, but not less than sixteen or twenty ounces should be taken away.

Immediately after this operation a smart purgative (see this Class, P. 1 or 4) should be administered, and if it does not produce a quick effect, the dose ought to be repeated, and this, if necessary, be assisted by a laxative clyster. See P. 16, of this Class.

If the delirium, or other unpleasant symptoms, are not greatly abated by the bleeding, the operation should be repeated the same day, proportioning the quantity now drawn off to the urgency of the case, and the habit and age of the patient. Besides drawing blood from the system in the manner before advised, it may prove advantageous to diminish the quantity in the head, and for this purpose from six to eight leeches ought to be applied to each temple. When they drop off, the wounds may be dabbed from time to time with soft linen rags wetted in hot water, to encourage a further discharge of blood from them.

Having taken these steps, the next thing to be done, is to have the head shaved, and a towel wetted in cold water and vinegar applied over the whole scalp, rewetting it from time to time when it becomes dry or warm. We should at the same time put on a large blister high up between the shoulders and neck. The blood may also be determined from the head to the lower extremities, by putting the feet into warm water, or where this cannot be done, by bathing them well with flannels wrung out in luke-warm water.

The purgative medicine should be repeated every other day during the continuance of the violent symptoms; for they will not only carry off feculent matter from the bowels, but diminish the too great quantity of the fluids distending the vessels of the head.

If the disease has been occasioned by the stoppage of any evacuation, either natural or artificial, such as the piles, menses, issues,

setons, or the like, proper means must be resorted to without loss of time to restore it, or substitute some other in its place.

Between the doses of the purgative medicine, the patient may take two table-spoonsful of the saline mixture, joined with nitre, (see the Class of Antiphlogistics, P. 4,) every three or four hours.

Throughout the whole course of the disease, the most perfect tranquillity should be observed in the patient's room; all sounds and light are to be excluded, and no food whatever is to be allowed during the inflammatory period, except barley water, gruel, panado, sago, arrow root, or the like. The common drink should be lemonade, tamarind beverage, or barley water, with a little nitre dissolved in it.

OF INFLAMMATION OF THE EYES.

Symptoms.—The disease consists in an inflammation of the membranes of the eye, or of its whole bulb, distinguishable by great redness, heat, pain, and distention of the parts, accompanied with intolerance of light, and an effusion of tears, or discharge of an acrid watery humour. The pulse is sometimes affected when the inflammation runs high, and there is some degree of fever; it is then quick and hard. The patient feels a pricking pain, as if his eyes were pierced with a thorn, or it conveys the sensation of some particles of gravel or sand having insinuated themselves between the eye-lids.

Causes.—The causes producing an inflammation in the eyes, are long exposure to cold winds, or whatever gives a sudden check to perspiration; sudden transitions from darkness to a bright light; external injuries, as blows, bruises, and the like; extraneous substances lodging between the eye-lids; repeated intoxications; reading or writing much by candle light; the acrid fumes arising from the fusion of metals, and from several kinds of fuel; or the suppression of some accustomed evacuation or eruption behind the ears, this last often giving rise to it among children. The disease sometimes prevails epidemically, especially after wet seasons, and not unfrequently arises as a consequence of some preceding venereal taint, or from a scrofulous habit of body. Where a purulent discharge issues from the eyes, and this is applied to these organs in another person, the disease has been communicated, and now and then assumed a high degree of virulence. Children of women affected with the whites at the time of their birth are often attacked with the purulent species of the disease. The application of the matter from a person afflicted with the clap, either accidentally or willfully, to the eyes, has been known to occasion a very severe inflammation, attended with a similar discharge of purulent matter, and to have caused a total loss of sight in some cases.

No bad consequences usually arise from a slight inflammation of the eye, proceeding from an external cause; but when violent and of some continuance, it now and then leaves specks upon the eyes, or occasions a dimness of sight, or an opacity of the lens.

vulgarly called the glass of the eye. In scrofulous habits, the inflammation is apt to shift from one eye to the other, and to prove both tedious and difficult to remove.

Treatment and Regimen.—In all cases of severe inflammation of the eyes, particularly if accompanied by a febrile disposition, blood should be drawn from the arm, proportioning the quantity taken away to the exigency of the case and the age of the person. In milder cases, we may substitute the application of six or eight leeches to the lower eye-lid, which place will be preferable to the upper one, or the temples. When they drop off, the flow of blood should be encouraged as much as possible, by dabbing the wounds from time to time with a bit of soft linen rag dipped in warm water. Where the inflammation continues obstinate and not much abated, the application of fresh leeches on the second or third day will be advisable.*

After bleeding in either of the ways which have been mentioned, an active purgative (see this Class, P. 1 and 4,) should be given, and this we may direct to be repeated every third or fourth day until the inflammation is subdued in a great measure.

It will of course be understood that where this has been occasioned by particles of sand, dust, lime, or any metal, small flies getting into the eyes, or the hairs of the eye-lids turning inwards and producing irritation, let the cause be it what it may, it ought to be removed. In all cases, it will be advisable for the patient to cover the eye affected with a shade of green silk, and to take care that there is not a glaring light in his room, either from candles or the fire.

To assist in diminishing the inflammation, it will be advisable for the patient to bathe the eye or eyes, if both are affected, with a proper wash, by means of folds of linen wetted therewith and squeezed into the organ, afterwards applying the wet rag over the part affected. Where the pain is very acute, we can use a decoction of bruised poppy heads in a tepid state, changing it occasionally after a day or two for some more appropriate lotion, (see the Class of Sedatives, P. 3,) and using it in the same manner as the former, or by means of an eye-cup; but where there is a purulent discharge, and there is reason to apprehend the matter may not be readily dislodged from between the eye-lids, the best way will be to wash it off by means of a small syringe of ivory or elastic gum charged with the fluid, and this gently squirted over the eye, having first separated the lids as much as possible, or rather everted them with the fingers of an assistant. The wash should be used several times during the twenty-four hours, and if one does not

* The great use which has been made of these creatures of late years has not only enhanced their price, but made it difficult at times to procure them. From the want of proper treatment after being once used, they very frequently die, or become so torpid as not to bear their being applied a second time. Sprinkling with salt is the usual mode adopted to make them disgorge the blood they have sucked; but this not unfrequently kills them. The best application is to touch them with a little vinegar, they will then bear being re-applied several times.

seem to have the desired effect, another may be substituted. Where the pain is very acute, dropping a few drops of the vinous solution of opium into the eye often affords ease and relief.

In the early stage of every variety of severe inflammation of the eyes, it has been recommended by our best oculists to excite nausea, or indeed full vomiting, by administering a solution of the tartarized antimony, See the Class of Emetics, P. 4 and 5.

When the inflammation does not yield to all these means, it will be advisable to apply a blister behind each ear, or to the nape of the neck, keeping up a discharging surface for a proper time, by dressing the sore with the cerate of Spanish fly, or that of savin.

The eye-lids are apt to be closed and glued together during the night by a thick matter which is secreted, to prevent which, they may be smeared occasionally with an ointment composed of equal parts of spermaceti cerate and that of the superacetate of lead.

Where the eyes become inflamed from venereal matter circulating in the mass of fluids, it will be necessary to resort to a use of mercury, as advised under the head of Venereal Disease. When they are affected in a like manner from a scrofulous habit of body, and which cause often produces an obstinate disease, it will be necessary to adopt sea-bathing, together with a use of Peruvian bark, conjoined with the subcarbonate of soda and alterative medicines. See this Class, P. 2, 3, and 9, or as specified in treating of Scrofula.

In those cases of inflammation of the eyes, where the pain is so severe as to deprive the patient of sleep for any continued time, a composing draught may be administered at bed-time. See the Class of Anodynes, P. 5.

At the commencement of such affections, the diet, except in scrofulous constitutions, ought to be very spare indeed, consisting of gruel, weak broths, and vegetables. The drink may be toast and water, herb tea, lemonade, a solution of preserved tamarinds, or barley water, carefully abstaining from wine or any other fermented liquor.

Persons who are subject to inflammatory affections of the eyes should carefully avoid all exposure to cold, and particularly to sharp winds, and they should wash their eyes every morning with cold water, by immersing the head therein for a few minutes, and twinkling their eyes all the time. Where these organs are weakened by previous inflammation and weep much, some strengthening wash may be employed. Ten or twelve grains of the sulphate of zinc, dissolved in five ounces of rose water, will answer this purpose very well.

A very severe species of the disease, and of a highly purulent nature, prevailed among the troops who served in the campaign in Egypt, and many of them returned to Europe perfectly blind, and others severely afflicted with it. By intercourse with other soldiers, and not using sufficient precautions, the disorder became very prevalent, and spread through many regiments, affecting the

officers as well as the common men. The only treatment that succeeded was very active depletion with the lancet at the onset of the disease, (the loss of blood of being carried to a very high degree indeed), assisted by the other means which have been pointed out as necessary in common opthalmia, or inflammation of the eyes.

OF INFLAMMATION OF THE THROAT OR QUINSY.

This disease is frequently met with during the winter and spring, particularly among persons of a full habit of body, and it is very apt to return from any improper exposure to cold.

Symptoms.—It comes on with slight shiverings and flushings succeeding each other, after which, inflammation is perceived to occupy the tonsils, palate, and neighbouring parts: the voice then becomes hoarse, and sometimes nearly lost, the act of swallowing is painful and difficult, there is a sense of burning heat, attended with darting pain in the throat, a copious excretion of viscid spittle and mucus is thrown out, the cheeks are swollen and florid, and the eyes are red and inflamed in some cases, and not unfrequently there is pain in the ear, and perhaps deafness. The breathing is often difficult and impeded, and the pulse is full, hard, and quick, its beatings being from 100 to 130 in a minute. The inflammation generally attacks one tonsil at first, which it sometimes leaves in a day or two, and affects the other, and not unfrequently the inflammation extends to the lungs. The patient's breath is sometimes so impeded by the constriction of the throat that he cannot lie down, but is obliged to keep himself nearly in an erect position, from a dread of suffocation. In a few cases small white spots are to be observed on the tonsils. Where the inflammation is very violent, and puts a stop to respiration, the face assumes a livid hue, the pulse sinks, and death is the consequence. In the like case, the patient is sometimes destroyed merely from the inability to swallow any kind of food, even of a liquid nature, to support life.

Causes.—A quinsy is occasioned by all those causes which induce inflammation in other parts of the body, particularly by the application of cold to the neck, as by sitting in a current of air; by wearing damp linen, sitting in a damp room, getting wet in the feet, violent exertions of the voice, blowing wind instruments, the suppression of customary evacuations, and acrid substances irritating the throat. From some peculiarity in the atmosphere, the disease occasionally prevails epidemically.

The quinsy may readily be distinguished from the ulcerated and malignant sore throat by the fever which accompanies it being purely inflammatory; whereas in the latter, it is of a typhous nature: moreover, there are no ulcerations on the tonsils or palate in the former.

Little fever; the swallowing not much impeded, the breathing free; the inflammation being of a vivid red colour; a copious dis-

charge of spittle coming on about the fifth day; the skin moist, and the pulse moderate, are to be looked upon as favourable circumstances.

A sudden abatement of pain after unusual violence; the tonsils, before turgid, moist and shining, suddenly appearing dry, flaccid, and of a pale brown or livid colour; the inflammation changing to a dull red, and being interspersed with specks of a dark appearance; the pulse becoming small, weak, and irregular; the face assuming a ghastly appearance, from being before flushed; the extremities becoming cold; great anxiety; the tonsils enlarging to such a size as to endanger suffocation; foaming at the mouth, stupor, or delirium; are symptoms which denote a fatal termination of the disease.

Treatment and Regimen.—Quinsy being a very dangerous disease, and not unfrequently terminating rapidly in the destruction of life, the most active means should be adopted at an early period to subdue the inflammation. Whenever this runs high, blood should be drawn from the jugular vein, or from the arm, to the extent of sixteen or twenty ounces, if the person is an adult of a full habit, but if not, a loss of twelve ounces may be sufficient. Should the soreness and inflammation not be subdued by the bleeding, the operation ought to be repeated the same or succeeding day.

The next step to be taken, is to administer an active purgative (See this Class, P. 1, and 4), which if not found to operate soon and sufficiently, may be assisted by a laxative clyster of thin gruel, with a little common salt dissolved in it, adding also half an ounce of castor oil.

Blistering the throat will not be necessary, unless the inflammation is very considerable internally, and in that case, it will be an advisable step after bleeding and purging, or we may substitute the application of half a dozen leeches. In ordinary cases, both of these may be dispensed with, and the throat be well rubbed twice or thrice a day with strong volatile liniment, made by mixing one ounce of olive oil with half that quantity of the solution of ammonia, covering it afterwards with a piece of fine flannel.

At the same time, the patient may inhale the steams arising from warm water mixed with vinegar, which he may do frequently, making use afterwards of some proper gargle, such as the acidulated infusion of roses, or barley water made of a sharp taste, by an addition of a sufficient quantity of muriatic, or diluted sulphuric acid.

Where the febrile symptoms run high, the saline mixture, with an addition of nitre, (See the Class of Antiphlogistics, P. 4) may be taken in the quantity of two table-spoonsful every four hours.

It is to be understood that as long as the inflammation continues, the purgative medicine before prescribed ought to be repeated every second or third day, and to assist in determining the blood from the head, it may be advisable to direct the patient's feet to be put into warm water at night, previous to his going to bed.

By an early adoption of the means which have been pointed out,

we shall, in general, be able to subdue the inflammation, and prevent a suppuration in the tonsils from taking place; but should our exertions be foiled, and a tendency to form matter become evident, the suppuration is then to be accelerated by applying an emollient poultice outwardly to the throat, and by steaming it in the manner before mentioned, at the same time making use of warm barley water or the like as an internal fomentation; this may be kept constantly in the mouth, and a little be swallowed from time to time.

If any danger from suffocation arises, the tumid parts ought to be well scarified with the edge of a lancet, where no fluctuation of matter is apparent. Where this is obvious, the tumour ought to be broken by the action of vomiting, or be opened, and its contents discharged, which will not fail to afford instantaneous relief.

The tumour is, however, of so considerable a size sometimes as to be incapable of reduction, and thereby to threaten suffocation; in which case the assistance of a surgeon is immediately requisite, that an aperture may be made in the windpipe through which respiration can be carried on until the swelling subsides. The operation being attended with no danger, should not be deferred too long. If not resorted to in due time, death will be the inevitable consequence.

If the patient should be incapable of swallowing during any period of the disease, his strength must be supported by nourishing clysters of animal broths, thick gruel, or a solution of starch. During the inflammatory stage of the disease, and whilst he is capable of swallowing, his diet ought to consist wholly of arrow-root, gruel, and barley water, the latter being gently acidulated with lemon juice.

Some people are very subject to inflammation of the throat: these should guard carefully against any exposure to cold, or other exciting cause, and they should lead a life of strict temperance.

It sometimes happens that after an inflammation in the throat has subsided, the glands remain somewhat swelled, and become hard and callous. The best method, under such circumstances, is to keep the throat warm, and to gargle it morning and night with the acidulated infusion of roses, or barley water sharpened with the diluted sulphuric acid. See the Class of Astringents, P. 13, and 15.

A variety of quinsy of a very fatal nature sometimes occurs, where the inflammation principally occupies the mucous membrane of the larynx, (that cartilaginous cavity situated behind the tongue, in the anterior part of the throat), occasioning very difficult respiration, nearly amounting to a sense of suffocation, the voice being extremely hoarse or reduced to a scarcely audible whisper, with the presence of inflammatory fever.

Like the common quinsy, it is occasioned by exposure to cold, and if the inflammation is not early attended to, and subdued by adopting active means, the patient dies from suffocation.

As his life depends upon copious bleeding, both from the system, in general, as well as from the neighhourhood of the inflamed parts, the former by drawing from sixteen to twenty ounces of blood from the jugular vein, or arm (supposing the patient to be an adult), and the latter, by the application of a dozen leeches to the throat; blood-letting in both of these ways should be adopted during the first twenty-four hours from the commencement of the attack, repeating both operations on the same day or the ensuing one at furthest, if the breathing is not very considerably relieved.

An active purgative, as in the common quinsy, should also be given every second day, and these several means to subdue the inflammation are to be assisted by the application of a large blister on the upper part of the chest immediately under the throat, by directing the fumes or steam arising from warm water and vinegar to be frequently inhaled, and by gargling often.

Where matter forms, the abscess may possibly be broken sooner by exciting vomiting by means of an emetic, and suffocation thereby be prevented. If life is endangered by the obstinacy or severity of the inflammation, the assistance of a surgeon is immediately requisite for performing the necessary operation; this being the only chance the patient can have of escaping suffocation, as through the aperture which will be made, he will be enabled to breathe till the inflammation has had time to subside.

OF THE MUMPS.

In this disease, the inflammation spreads to the parotid and maxillary glands, affecting also the ligaments and muscles which raise up and connect the lower with the upper jaw: hence, although there is seldom any remarkable degree of fever, the external swelling is very large, and there is severe pain on opening the mouth.

Like other inflammatory affections, the mumps generally come on with cold shiverings, sickness, vomiting, pain in the head and back, and other slight febrile symptoms, which are succeeded after a little time by a swelling of the parotid and maxillary glands; sometimes only in one, but more frequently in both. The breathing and swallowing are in general but little affected, but when the swelling in the glands begins to abate, some degree of tumour frequently attacks the testicles in men and the breasts in women, which then become hard and painful: however, this affection is in general but of short duration. It increases until about the fourth day, from that period it declines, and in a few days goes off entirely. It is seldom that the tumours suppurate or form matter.

Treatment and Regimen.—In general all that is required in the mumps, is to keep the head and face warm by covering them with flannel, and the bowels sufficiently open by some cooling laxative medicine. See this Class, P. 3, 6, or 11.

Should the swellings disappear suddenly, and severe febrile

symptoms ensue, so as to excite any apprehensions of delirium or stupor coming on, we should endeavour to reproduce the tumours by applying warm fomentations, and rubbing the parts with some stimulant liniment. See the Class of Stimulants, P. 7, 8, or 9.

To moderate the febrile symptoms, it may be advisable to open the bowels freely by a laxative medicine, and either apply leeches to the head, or draw blood from the arm at the same time, if the patient is of a full habit and the fever runs high. The application of a blister to the nape of the neck, and administering the saline mixture, conjoined with nitre, (see the Class of Antiphlogistics, P. 4,) will also be proper.

Where the testicles or breasts become swelled, then, in addition to bleeding, both general and topical, purgatives and a use of the febrifuge mixture, the parts so affected should be placed in a suspensory bag, keeping at the same time linen cloths, wetted in some discutient wash, constantly to them. See the Class of Discutients, P. 1, 3, or 6.

OF THE PERIPNEUMONY AND PLEURISY;

Or INFLAMMATION *of the* LUNGS, *and Membrane with which they are enveloped.*

These two diseases are pretty similar, they arise from the same causes, are attended with nearly the same set of symptoms, and are to be removed by a similar treatment ; it will not be improper, therefore, to notice them under one head. In pleurisy the inflammation is most obvious in the pleura or membrane which envelops the lungs ; whereas in peripneumony, the inflammation is seated more in the substance of the lungs : it is scarcely possible, however, for inflammation to exist in the pleura without its extending in some degree also to the lungs.

Symptoms.—The pleurisy commonly commences with chilliness and shiverings, which are soon followed by thirst, restlessness, and great heat, as in inflammatory fever. The patient then feels a weight, as it were, in his chest, which in a few hours becomes acute pain, referred to the side, about the sixth or seventh rib, and from thence darting to the fore part of the breast bone, or towards the shoulder blades or back bone ; the breathing is very anxious, the pain is much increased when inspiration is performed, and there is an inability of lying upon the affected side. The tongue is white, the urine high coloured, the bowels rather confined, and the pulse is frequent, hard, and contracted, vibrating under the finger like the tense string of a musical instrument ; and if blood be drawn, it soon exhibits on its surface a tough crust, or coat of a buffy colour. Sometimes there is a cough, but this is usually dry and harsh at the commencement of the disease, although afterwards accompanied by an expectoration of viscid phlegm.

Peripneumony is accompanied with pretty nearly the same

symptoms as pleurisy; but in the former the pain is more obtuse or less acute, but attended with a greater sense of oppression and weight, the difficulty of breathing being more constant, the pulse softer, and the face more flushed and sometimes of a purple hue. There is also much coughing, but at first without any expectoration; this, however, takes place after two or three days, and is the principal means which nature adopts to palliate and remove the disease.

Both pleurisy and peripneumony terminate either in resolution, marked by the gradual abatement and subsidence of all the symptoms.

In adhesion of the diseased parts to the interior of the ribs, which is a very frequent termination.

When protracted beyond the seventh day, not unfrequently in suppuration; indicated by severe shiverings, the pain becoming more fixed, by a remission of the previous febrile symptoms, and the accession of hectic; by the breathing becoming less painful but more oppressed, and the patient lying with greater ease on the affected side.

In effusion, when a sudden remission takes place of both fever and pain, without preceding shiverings, the breathing becoming more anxious, and the symptoms of water in the chest ensuing. See this Disease.

The termination is occasionally by hemorrhage, the blood being either spit up, or collected in the chest. This is known by instant fainting with a sense of suffocation, followed by vast anxiety and oppression at the chest, and a pulse so depressed, as to be scarcely perceptible.

Causes.—Great or sudden vicissitudes of the atmosphere, obstructed perspiration from cold, wet clothes, or lying in damp sheets, &c.; violent exercise of the body, great and continued exertions in speaking, singing, or the blowing wind instruments, an improper use of fermented and spirituous liquors, the repulsion of eruptions, and the suppression of accustomed evacuations, are the chief causes which give rise to both pleurisy and peripneumony, particularly in persons of a full or plethoric habit of body. The winter and spring are the seasons of the year when these diseases most frequently occur.

It has been usual to consider peripneumony as of two kinds. When the disease is occasioned by a thin acrid defluxion on the lungs, it is denominated catarrhal or true peripneumony; but when it proceeds from a viscid matter of the mucous nature, blocking up the vessels of the lungs, it is commonly known under the name of the spurious or bastard peripneumony; and it is to this last species of the disease that elderly people are most subject.

We may draw a favourable opinion on the termination of the diseases in question, from the presence of the following symptoms, viz. A warm, equal, and free perspiration; the urine depositing a copious sediment; an early and free expectoration of mucus, or this being slightly tinged with blood of a florid red colour; he-

morrhage of blood taking place naturally from the nose; a gentle purging coming on; or the appearance of inflammation on an external part, that terminates kindly in suppuration.

The unfavourable symptoms are violent fever with delirium; the disease extending beyond the fourteenth day, when suppuration in the chest or a consumption are to be apprehended; little or no expectoration, or, if there is any, this being of a dark or black colour; a sudden cessation of pain, followed by a change of countenance, and a sinking or irregularity of the pulse. These symptoms denote an effusion in the chest, or suppuration.

Treatment and Regimen.—In both pleurisy and true peripneumony, the object to be kept in view is to reduce and carry off the inflammation; and the first step to be adopted to effect this purpose, is to draw off, if the patient is an adult, from sixteen to twenty ounces of blood from the arm immediately on the first attack of either disease, or as soon after as possible, taking care that the orifice is of such a size as to allow the blood to flow in a large or full stream.

In pleurisy, peripneumony, inflammation of the bowels, and all other diseases of the like character, it will be advisable for the surgeon to keep his finger on the pulse of the patient during the whole time of the operation of venesection, and so found his judgment of the quantity of blood it may be expedient to draw off, much more by the changes of action in the pulse than by the number of ounces abstracted. It may be stated as a general rule, that the flow of blood should not be stopped until the hardness and frequency of the pulse are very distinctly reduced, and the functions of the heart and lungs are performed with tolerable ease and freedom.

Should the inflammatory symptoms, after having abated for a time in consequence of bleeding, return again, the breathing be oppressed and difficult, the pulse be hard, full and strong, and the blood which had been drawn off, exhibit on its surface a buffy or yellow coat on becoming cool, the operation ought again to be resorted to, repeating it a second, third, fourth, or even fifth time, if found necessary.

Immediately after the first bleeding, a large blister should be applied over the painful part, be it the side as in pleurisy, or in the chest, which is mostly the case in peripneumony; and it should be allowed to remain on until it has done its office properly, when it may be removed and dressed. Should it heal up before the pain is subdued, a fresh one may be put on in the neighbourhood of the former.

At the commencement of either of these diseases, it will be advisable to give some gentle purgative; (see the Class of Purgatives, P. 1, or 4,) but throughout the remainder of both diseases, the occasional administration of merely laxative medicines, assisted by emollient clysters, will be more proper for keeping the bowels sufficiently open. See both these Classes.

Should the pain in the side or chest still continue, notwithstanding that bleeding from the arm has been early resorted to, and carried to a proper extent, and that blistering has been also employed, scarifications with the after application of cupping-glasses may be tried, and blood be drawn away in this way also, as it is more certain and expeditious than by applying leeches.

To determine to the surface of the body and excite a gentle perspiration, it will be advisable to give every three or four hours some diaphoretic medicine, such as the sixth of a grain of tartarized antimony in a common saline draught, or two grains of antimonial powder made into a pill, with a little confection of roses, washing it down with three table-spoonsful of a saline mixture, in which a little nitre has been dissolved. See the Class of Diaphoretics, P. 8 and 10.

It will also be advisable to promote expectoration by every possible means, and therefore, in addition to diaphoretic medicines, we should give pectorals. See the Class of Expectorants, P. 1, 2, 3, or 4. To assist these, the patient should frequently inhale the steam arising from a hot infusion of chamomile flowers, with a little vinegar added to it. These means will be doubly necessary when the cough is dry and troublesome. Should they neither produce perspiration nor expectoration, it will be proper to put the feet into hot water towards evening, or to make use of a warm bath, of about 97 or 98 degrees. Diluting liquors made gently tepid, (See the Class of Expectorants, P. 5,) or barley water, acidulated with lemon juice, should be taken repeatedly and freely at the same time.

It should be understood that after expectoration has freely taken place we should never resort either to bleeding, or purging, as these would be likely to stop it, and thereby endanger, if not destroy life; but that, on the contrary, our best endeavours are to be exerted, not only to promote it, but assist in keeping it up for a due length of time. We should never employ any opiate in the early state of the disease, however troublesome the cough may be.

If the pulse continues very frequent after the violence of the febrile symptoms has abated, a use of foxglove, in the dose of about twelve or fifteen drops of its tincture, repeated every six hours, will be highly appropriate; and we may either administer it in the common saline draughts, or add it to two table-spoonsful of any of the pectoral medicines before referred to.

The patient should be confined to his bed throughout the continuance of the disease, lying with his head and shoulders considerably raised up, the temperature of his chamber being neither below 50, nor exceeding 60 degrees of heat; and he should be kept as quiet and easy as possible. His diet must be spare and light. All sorts of meats, as well as animal broths, ought to be avoided, but particularly during the inflammatory stage of the disease. His strength may be supported by panado, gruel, sago, roasted apples, or bread spread with currant jelly, &c. For ordinary drink, he can take nothing better than barley water, either acidulated with

lemon juice, or having a little nitre dissolved in it; say one drachm of this added to every quart of the former. He should not drink any thing cold, but of a tepid heat, nor should he take a large quantity of any diluent liquor at one time, but frequently moisten his mouth and throat therewith.

By strictly and perseveringly adopting the means which have been pointed out, we shall in most cases be able to subdue the inflammation in both pleurisy and peripneumony; but should our endeavours fail, and suppuration or effusion in the chest take place, we then must put the patient upon a more generous diet, adding a little wine to such articles as are given him for food. As a medicine, we may order him to take some cordial diaphoretic combined with a vegetable bitter. See the Class of Diaphoretics, P. 11.

If the pulse sinks, or cold and partial perspirations appear, and the countenance becomes cadaverous, æther and camphor combined will be the best medicines, and wine must be given more liberally.

Persons who have recovered from an attack of either pleurisy or peripneumony, should be particularly cautious to guard against all causes likely to produce a return, as no diseases are more liable to a relapse than these.

OF THE SPURIOUS PERIPNEUMONY.

Symptoms.—This disease usually comes on with slight shiverings, succeeded by heat, flushing in the face, a sense of lassitude over the whole body, pain in the head, difficulty of breathing, oppression at the chest, and coughing, followed after a few days by some degree of expectoration, and occasionally with a slight throwing up of viscid phlegm.

Causes.—It most commonly is met with among elderly people, particularly those who have had any former affection of the lungs; it prevails most in the autumn and spring of the year, when the temperature of the atmosphere is variable, and its usual cause is exposure to cold in some way or other.

Where the patient is not much debilitated, the febrile symptoms do not run high, and the oppression at the chest is relieved by a free expectoration, there will be good grounds for supposing that the termination of the disease will be favourable; but sometimes an effusion of water, or lymph, takes place in the air vessels of the lungs, and destroys life by suffocation.

Treatment and Regimen.—If the breathing is very difficult, the pulse full and hard, and the person not debilitated by any previous disease, we may recommend six or eight ounces of blood to be drawn from the arm at the commencement of the attack; but otherwise this operation may be dispensed with, and cupping with previous scarifications be substituted in its stead over the chest.

We may afterwards apply a blister of considerable size, allowing it to remain on until the full effect is produced, when it is to be removed, and the part dressed with resin cerate.

It will be necessary, at the same time, to promote expectoration by the means advised in the treatment of the true peripneumony, such as the frequently inhaling warm steam; by giving pectoral medicines from time to time during the fits of coughing; and by drinking freely of barley water gently acidulated. Small doses of some antimonial preparation, as noticed under the same head, may be administered every four or six hours to determine the circulation to the surface of the body, and thereby excite a proper perspiration, and the effect of the medicine is to be aided by small quantities of some tepid liquor drank frequently.

Should costiveness take place during the continuance of the disease, this must be obviated by some gentle aperient (See the Class of Laxatives, P. 13), assisted by an emollient clyster. See this Class, P. 3.

The diet should be spare and light throughout the disease; but when its violence has subsided, or great debility becomes obvious, a more generous regimen, with a moderate allowance of wine, and light animal food, must be allowed.

On recovery, the patient should carefully guard against any return of the disease. He had better wear flannel next to his skin.

INFLAMMATION OF THE HEART

And its Enveloping Membrane; as also Inflammation of the Diaphragm.

These diseases are accompanied by acute fever, and severe pain in the parts affected, which is greatly aggravated by breathing, coughing, sneezing, taking food, making water, or going to stool.

They arise from the same causes that produce peripneumony and pleurisy, and particularly from an exposure to cold. Now and then they are occasioned by a sudden translation of gout, or rheumatism, to the heart or the diaphragm.

They are sometimes so combined with inflammation of the lungs, as to render it difficult to distinguish the one disease from the other; but this is of no great importance, as the treatment must be somewhat similar to both diseases. The means of cure should be resorted to with due promptitude, and be carried into execution with energy. See the treatment of True Peripneumony.

INFLAMMATION OF THE STOMACH.

Symptoms.—This disorder is marked by a burning heat and acute pain in the stomach, which is always increased upon swallowing, even liquids of the mildest kind. There is also extreme anxiety, a tension at the pit of the stomach, great thirst, frequent retchings, and vomiting, a small, quick, hard, and intermitting pulse, with great loss of strength, coldness of the extremities, clammy sweats, and hiccups.

Causes.—The causes which give rise to an inflammation of the

stomach are various, and it is produced by the sudden application of cold to the body in general, but more particularly the extremities, or to the stomach in drinking cold liquors when the body has been preternaturally heated by exercise ; by the translation of gout or acute rheumatism to this organ ; by the operation of corrosive poisons received into it ; by indigestible food, or hard substances, such as the stones of fruit, pieces of bone, &c. ; and, possibly, by the sudden repulsion of eruptions.

The disease is always to be considered as highly dangerous, for, if not speedily removed, it is apt to terminate in a mortification or suppuration. The latter is usually preceded by a remission of pain, increased sense of weight, with anxiety, and severe shiverings. The former is marked by a violent increase of the symptoms, followed by a sudden cessation of the heat and pain, great loss of strength, flaccidity and coldness about the vicinity of the heart, a rapid and intermitting pulse, cold extremities, hiccups, and finally death.

If the pulse becomes more soft and full about the third or fourth day, and at the same time diminishes in frequency ; if the pain gradually ceases, and the urine deposits a sediment, or a purging arises, we are to regard these symptoms in a favourable light ; but, on the contrary, the disease being extended to seven days or more with shiverings, followed by a sense of weight in the region of the stomach, frequent faintings, and an intermitting pulse, these are to be considered as marking the accession of a mortification, and, of course, a fatal termination.

Treatment and Regimen.—From whatever cause the inflammation may have arisen, we should remove it, if possible, in the most expeditious manner ; for death may be the consequence within the twenty-four hours, or sooner, if active means are not promptly adopted. Draw blood therefore from the arm in a full stream, and from a large orifice to a considerable extent, (say twenty ounces at once) and repeat the operation again and again, but in a smaller quantity, every four or six hours, as long as the symptoms continue unabated. The pulse usually rises, and becomes softer and fuller after bleeding, and as long as this is the case, the operation may be considered as safe and beneficial.

The next step should be the application of flannels, wrung out in a hot decoction of chamomile flowers and bruised poppy heads, over the region of the belly, rewetting them from time to time as they become cold. If a warm bath can be obtained, it will probably afford some relief. Immediately after these, a large blister should be laid on over the diseased part.

The bowels may then be opened by an emollient clyster, (See this Class, P. 3), and this be repeated occasionally, as shall be found needful. The remedy will not only remove costiveness, and act as an internal fomentation, but at the same time nourish the patient until he is able to retain proper food upon his stomach.

To allay the irritation and pain in the organ in question, the patient should take, from time to time, some mucilaginous dilu-

ent liquor such as linseed tea, thin gruel in which a little gum acacia has been dissolved, barley water, or chicken broth, in very small quantities. If the stomach rejects every thing almost as soon as it is swallowed, we should give him every two or three hours a saline draught in the act of effervescence. See the Class of Antiphlogistics, P. 5. Should this fail in allaying the vomiting, we may make trial of a small glassful of the acidulated soda water.

After the stomach becomes tranquillized, should there be any difficulty in keeping the bowels open by clysters, some gentle aperient must be administered by the mouth. See the Class of Laxatives, P. 5 or 6.

If the disease has been occasioned by any corrosive poison, such as arsenic, corrosive sublimate, the mineral acids, or the oxalic acid, which is now and then mistaken for purgative salts and swallowed incautiously, after the employment of that valuable machine, the stomach pump, for the purpose of evacuating the poisonous matter, and washing the stomach well out with water or some other diluent liquid, it will be advisable to inject or give by the mouth such medicines as possess the power of neutralizing any of the poison that may happen to be left behind or unremoved. See Poisons, under which head are enumerated the proper antidotes for each.

When there are symptoms which indicate that a suppuration has taken place, opium may be given in small doses to allay the irritability and pain of the stomach, supporting the strength at the same time with mild vegetable nourishment, such as Indian arrow root, sago, barley, &c.

If gangrene takes place, medicine or, indeed, any thing else, will be of no avail, as inevitable death must be the consequence.

INFLAMMATION OF THE INTESTINES.

Symptoms.—This dangerous and painful disease is characterized by acute pain in the bowels, which is much increased upon pressure, and shoots round the navel in a twisting manner; there is obstinate costiveness, tension of the belly, and a vomiting generally bilious, or dark and fetid; the urine is high coloured, the pulse quick, hard, and contracted, with some degree of febrile heat, thirst, and great depression or loss of strength. The patient is constantly belching up wind, and, in protracted cases, he even discharges excrement by the mouth, the motion of the intestines becoming inverted from their being no passage downwards.

If by the adoption of proper means at an early period we are able to subdue the inflammation, and copious evacuations by stool ensue, then there will be a gradual diminution of all the symptoms, and in due time health will be restored; but when there is a sudden cessation of pain and anxiety, and the patient becomes calm and collected, the countenance assumes a livid and cadaverous hue, and the pulse intermits, hiccups and startings of the tendons take place, the face and hands are bedewed with clamy sweats, and the

extremities become cold, we may be assured that a mortification has taken place.

Causes—An inflammation of the intestines is occasioned by long continued costiveness or hardened feculent matter lodged in some part of the tube; by the strangulation of a protruded portion of the gut in a rupture, by preceding colic, eating unripe fruits or great quantities of nuts, and by scirrhous tumours of the intestines, or strictures; but the most frequent cause is exposure to cold, particularly when applied to the lower extremities or belly itself, and occasionally by cold drink swallowed when the body is much heated by exercise.

The only disease which can be mistaken for this, is colic; but an inflammation of the intestines is accompanied with fever, the other not; the pain moreover is considerably increased by pressure with the hand on the belly, whereas in colic it is thereby somewhat relieved. The chief symptom indeed which distinguishes inflammation of the intestines from a colic is the extreme tenderness of the belly to the touch in the former disease, which, coupled with a quick small pulse and other appearances usually attending on an inflammation of the intestines, cannot fail to point out with great certainty the nature of the malady.

The following symptoms denote a favourable termination, viz. the pulse losing its frequency and becoming natural; the pain changing its seat, and not being confined to a particular part; the belly becoming less tender to the touch and less painful; stools taking place; the urine depositing a sendiment; and a warm equable sweat diffused over the body. The symptoms which have already been enumerated as indicative of a mortification having taken place, point out approaching dissolution.

Treatment and Regimen.—The first and grand object to be kept in view is to subdue the inflammation in the bowels by early and active depletion with the lancet, and afterwards to procure sufficient stools. As soon therefore as possible, after the disease has become obvious, a proper quantity of blood (say from sixteen to twenty ounces, if the patient is an adult) should be drawn from the arm, the surgeon taking care to make the orifice of the wound of such a size, as that the stream shall be free and large, which is a point of considerable consequence in this and other severe inflammatory diseases. The smallness of the pulse in inflammation of the intestines is apt to deceive, and intimidate us from resorting to bleeding; but it will, invariably, be found to rise, and become fuller after the operation in question. Should the pain and great soreness in the belly still continue, together with the symptoms which denote the inflammatory action in the bowels to be unsubdued, we ought to open the vein again within a few hours, and draw off more blood, in a quantity proportionable to the severity of the disease, and the age and habit of the patient. When the disorder is severe and obstinate, it may be necessary to repeat the bleeding several

times; and we may be assured that as long as the pulse rises after the operation, the remedy is both proper and safe.

Having drawn blood freely from the arm, it will then be advisable to resort to topical bleeding, by the application of a dozen or twenty leeches to the belly, encouraging a discharge of blood from the wounds, by laying on a flannel cloth wrung out in warm water, rewetting it afresh from time to time.

As soon as the effect of the leeches has ceased, the application of a large blister over the belly will be proper, and this will, in general, be found to afford great relief; but prior to its application, some benefit might possibly be derived from putting the patient into a warm bath. Where this remedy cannot be adopted, we must be content to bathe the feet and legs frequently in luke-warm water. Fomentations to the belly are useful applications, but they interfere with blistering it, which is more likely to afford relief.

These several means having been adopted, the attention should then be directed to the procuring of stools by aperient medicines, such as castor oil or a solution of sulphate of magnesia in an infusion of senna assisted by emollient clysters. See the Class of Laxatives, P. 11, 12, or 15. Should these fail in opening the bowels, more powerful ones must be employed (See the Class of Purgatives 1, 3, or 4), assisted by active clysters. See P. 5 or 6 of the same head. If these last fail, we can make trial of one composed of a solution of soap in a little tepid water; for this will often procure stools readily by its solvent power over hardened feculent matter that may be lodged in some part of the intestinal tube.

Respecting the administration of purgatives by the mouth, I think it right to caution every person who may be in attendance on the sick, not to resort to their use until after the inflammatory action in the intestines has been considerably reduced, if not wholly subdued, by previous sufficient depletion by the lancet, and the application of leeches. Until this object has been attained, purgative medicines are more likely to do harm than afford any relief. This circumstance is of the very highest importance, and ought to claim our strict attention.

To allay the irritation at the stomach and vomiting which not unfrequently attend this disease, to some it may appear necessary to give an opiate with the view of tranquillizing this organ; but opium should never be administered until after active bleeding, both generally and topically, and until some motions have been procured by laxative clysters and aperient medicines, and even then, it will always be best to combine it with some purgative. From half a grain to one grain of opium, with five grains of calomel and ten of the powder of jalap or extract of colocynth, may be taken for a dose, made up into three or four pills with a little common syrup.

Croton oil is a very active purgative, and would seem of particular use, when, from the great irritability of the stomach, medicine

in any quantity or of a bulky nature cannot be retained on it. It may be given in the dose of one or two drops on a bit of sugar, or enveloped in a little crumb of bread, repeating it in two or three hour's time if the bowels do not previously act sufficiently.

Where purgatives fail in procuring motions, it is not uncommon to give quicksilver, which, by its gravity, may be likely to make its way through the intestinal tube; but I cannot recommend the remedy; for should the obstruction proceed from one portion of the gut slipping into another, as is sometimes the case, it would infallibly increase the disorder. The same would happen in the case of a strangulated rupture.

In all cases of inflammation in the intestines, the only chance the patient has of being preserved from death, is by an immediate employment of *active* bleeding, blistering the belly, and the after use of clysters and gentle aperients, as mortification is apt to take place very soon, when these means are neglected.

When the inflammation is the consequence of some acrid poison swallowed, it requires the same treatment as is recommended under the head of these. See Poisons. If it is combined with spasmodic colic, the means advised under that head should be adopted.

If the disease has proceeded from a rupture which has become strangulated, the stricture on the parts protruded is to be removed by copious bleedings from the arm; by applying ice, or cloths wetted in cold water and vinegar over the rupture; by emollient clysters, and placing the head of the patient lower than his hips, and then endeavouring to return the parts protruded, by making a gentle pressure with the fingers. If after a fair trial of these means, we are foiled in our endeavours, the assistance of a surgeon will be necessary, as an operation will then be requisite to remove the stricture and prevent a mortification from ensuing.

In all cases of inflammation in the intestines the food should be very light, and only be given in small quantities at a time, and the drink be diluting and weak, as barley water, toast and water, and very thin gruel. The patient is to be kept very quiet, and to avoid all agitating passions of the mind. As the disease is apt to recur from exposure to cold, as also from costiveness and improper food, these are most cautiously to be guarded against.

INFLAMMATION OF THE PERITONEUM.

This membrane envelops and surrounds all the different organs which are seated in the abdomen or cavity of the belly; it defends them from injury by any motion or concussion, and their whole mass is prevented through its means from being misplaced by their own weight.

The disease is accompanied by symptoms pretty similar to the same affection of the intestines just pointed out; it arises from the same causes, and is to be treated in a similar manner, by active depletion at its very commencement; by general and topical bleedings;

by fomentations to the belly; and by emollient clysters, assisted by laxative medicines administered by the mouth.

Inflammation of the peritoneal membrane is frequently met with in lying-in women, particularly where the labour has been tedious and difficult, or where the necessity of the case has required a use of instruments.

INFLAMMATION OF THE LIVER.

There are two species of this disease, viz. the acute, and the chronic, the former being accompanied by symptoms of genuine inflammation; the latter with those of less violence as to their inflammatory disposition, but with a weight, hardness, or enlargement of the liver, an obtuse pain therein, clay-coloured stools, a sallowness of countenance, and urine which deposits a pinky sediment on cooling.

Symptoms.—The acute disease is marked by a pungent pain in the right side of the belly, increased by pressure with the hand, often extending to the chest and right shoulder, some difficulty of breathing, a dry cough, thirst, sallow countenance, a yellow tinge in the white parts of the eyes, and sometimes actual jaundice, high coloured urine, and either costiveness or a purging. In some instances, there is a deficiency of bile in the intestines, and then the stools are always of a clay colour; sometimes there is a superabundance, which passes off by vomiting and stool.

According to the degree of inflammation, and the part of the liver which it chiefly occupies, so will the symptoms vary. When the concave surface is affected, the pain is more obscure, and is referred to the back, the breathing is less anxious, but the functions of the stomach are more disturbed, giving rise to vomiting, hiccup, and other symptoms characteristic of inflammation in this organ. When it is the convex part of the liver that is affected, the pain is more acute, and extends to the shoulder, there is a difficulty of lying on the left side, and the pulse is quicker.

The chronic disease is frequently of so mild a nature, and so obscure at its commencement, as to excite neither uneasiness or pain, and it is therefore long unattended to in many instances. It is, however, marked at last. by loss of appetite, flatulence, a sense of fulness and distention of the stomach, weight, and obtuse pain the region of the liver, extending to the back, sallowness of the countenance, inactivity of body, dejection of mind, obstinate costiveness, and clay-coloured stools. Where proper means are not resorted to in due time to counteract the disease, jaundice, scirrhosity of the liver, and dropsy, are apt to ensue.

Acute inflammation of the liver terminates usually in resolution, that is to say, in a gradual abatement of the pain and febrile symptoms, so as at last wholly to go off, about the seventh or eleventh day: or in suppuration and abscess.

Causes.—Both species of inflammation of the liver are occasion-

ed by an exposure to cold, by the irritation of acrid bile, biliary concretions, intense heat, intemperance in the use of vinous or spirituous liquors, external injury, the violent operation of emetics, and passions of the mind. These affections of the liver very frequently occur in warm climates, particularly in the East and West Indies: and they are often met with in persons who come to Europe from thence, and who have been there affected with these complaints.

There is, however, some dissimilarity between inflammation of the liver as it appears in India, and that which occurs in colder climates. That of India partakes more of obstruction and inflammatory congestion; the other of active inflammation, which, if not speedily checked, is apt to terminate in suppuration and abscess. The Indian disease, moreover, is always attended with a flux, which is not usual in the other, and in all its stages is allowed to be milder than the complaint commonly met with in Europe.

Inflammation of the liver may readily be distinguished from the like affections of the stomach and intestines, by the seat of the disease, discovered by tenderness upon pressure; by the sympathetic pains of the clavicle and shoulder: by the colour of the stools and urine, and there being less depression of strength, and a greater fulness of pulse.

If about the fifth or seventh day, there should arise a purging of bilious matter, a general and free perspiration, and a copious deposit in the urine, followed by an abatement of the fever, pain, and other symptoms, we are to regard such appearances in a favourable light. On the contrary, intensity of fever and pain, obstinate constipation, severe chilliness and shiverings succeeded by transient flushes, frequent hiccups, and cold extremities while other parts are very hot, are to be considered as unfavourable, and denoting imminent danger. Where the inflammation proceeds on to suppuration, and the matter cannot be discharged outwardly by opening the abscess, the danger will be very great. The chronic form of the disease, marked by a preternatural hardness and enlargement of the liver, when arising in a constitution much impaired by previous excesses, often proves fatal in consequence of being succeeded by incurable jaundice and dropsy; but where the constitution is pretty good, and the patient observes an abstemious regimen, and takes proper medicines, he may be enabled to live for many years in tolerable ease, although the organ continue somewhat enlarged and indurated.

Treatment and Regimen.—At the commencement of the acute species of this inflammation, it will be proper to draw blood from the arm, proportioning the quantity so taken to the severity of the pain, the violence of the febrile symptoms, and the age of the patient. Under aggravated circumstances (supposing the person to be an adult) from twelve to sixteen ounces of blood should be drawn off from the arm in a free stream, by means of a large orifice; and should the inflammatory symptoms not be considerably abated after a lapse of eight or ten hours, the operation ought to be repeated.

In cold climates, this discipline will be more requisite than in warm ones.

The next proper step will be to give some active cathartic, so as to open the bowels freely, (See the Class of Purgatives, P. 1, 3, or 4), and this medicine we should repeat again the second or third day, employing aperient and emollient clysters (See the Class of Laxatives, P. 16) during the intermediate ones.

A large blister is to be applied over the part that is painful, and if it should be disposed to heal up before our object is attained, it will be necessary to put on another, as near the former as possible. Should blistering be objected to by the patient, the application of several leeches over the painful part, with the after use of warm fomentations, may be substituted.

To moderate the febrile heat, it may be advisable to excite a gentle moisture on the skin by giving some diaphoretic medicine (see this Class, P. 5 and 8) every three or four hours, assisting its effect by drinking frequently of some diluent tepid liquor, such as barley water, &c. At night the feet may be put into hot water. Where the skin is very dry, and the pain in the region of the liver severe, a warm bath may possibly be used with advantage.

Having adopted the plan which has been recommended during the first four or five days of acute inflammation, we may then resort to a use of mercury, such as calomel, or the quicksilver pill, vulgarly called the blue pill. (See the Class of Deobstruents, P. 7 and 8.) To ensure the full effect of the pills, one of which may be taken every six hours until the mouth becomes somewhat tender, and a slight spitting takes place, the patient should be directed to rub in half a drachm of the strong mercurial ointment over the region of the liver every night at bed-time. During this course, some gentle aperient (see the Class of Laxatives, P. 11 and 13,) should be taken every second or third morning. In this place I would observe, that the blue pill is a valuable remedy in affections of the liver and other biliary organs; but from its having become too fashionable a medicine, it is often given in other diseases very unnecessarily, and no doubt frequently to the injury of the patient.

A short course of mercury will in general be sufficient to remove the disease; but if not, we should persevere in its use until the object is attained.

In India, the disease partakes more of inflammatory congestion and obstruction than of active inflammation, and does not therefore require that copious depletion by bleeding from the arm which is necessary in cold climates at the commencement. In the former it will generally be sufficient to draw blood from the neighbourhood of the part affected, my means of several leeches, or cupping glasses after previous scarifications; then to empty the bowels perfectly, and afterwards, without further loss of time, to resort to a use of mercury, given in successive moderate doses so as to excite some slight degree of salivation, assisting the effects of the medicine internally exhibited, by rubbing from half a drachm to one

drachm of strong mercurial ointment every night over the region of the liver. Should the part be too tender to admit of this, the ointment may be rubbed into the groins and thighs. Every third or fourth morning, some gentle aperient (see the Class of Laxatives, P. 11 and 12,) should be taken.

If the inflammatory disposition is not subdued by the means which have been advised, and proceeds on to suppuration, all methods must be tried to make the abscess break outwardly. It therefore will be necessary to keep an emollient poultice constantly over the part, renewing it twice or thrice a day, previously fomenting it well with flannel cloths wrung out in a decoction of marshmallows and poppy heads. (See the Class of Emollients, P. 4 and 5.) If the tumour points, or becomes soft in any particular spot, it must be opened by a surgeon, who is to place the patient in the most favourable position to facilitate the discharge of the matter. After it is opened, a generous diet with wine, and some doses daily of the Peruvian bark, will be advisable.

Where the inflammation, in spite of our best endeavours to arrest its progress, terminates in scirrhosity and enlargement of the liver, constituting the chronic disease, the remedy chiefly to be depended upon is mercury, which may be given as directed in the latter stage of the acute form; but in doses not so frequently repeated, the object not being to excite any degree of salivation, but to promote the due secretion of bile, and reduce the hardness and enlargement. Frictions morning and night with the hand, and the occasional use of a tepid bath, may prove useful auxiliaries.

Attention is at the same time to be paid to the state of the bowels by promoting sufficient evacuations, for which end some aperient medicine ought to be administered every third or fourth morning. (See the Class of Laxatives, P. 11 or 13.)

Dandelion is a medicine which has been found of great utility in many cases of indurated and enlarged liver, and the patient may either take from two to four ounces twice or thrice a day of the expressed juice, or about half a drachm of the extract made into pills, twice in the twenty-four hours.

The nitric acid is another remedy which has proved beneficial in such cases, and may be given in doses of eight drops three or four times a day, in an infusion of lemon peel, as that of cascarilla, calumbo, or gentian. (See the Class of Tonics, P. 4, 5, or 6.)

Where there is an obtuse but troublesome pain in the organ, it may be advisable to put on a large blister, and after a time to repeat the application; but where there is only a hardness and enlargement, we may cover the part with a resolvent plaster. (See the Class of Discutients, P. 7.)

The same regimen is to be observed in the acute form of the disease, as in other inflammatory disorders. The food must be light and thin, consisting wholly of vegetable preparations, and the drink of cool diluting liquors, such as barley water, whey, &c. In the chronic form, the patient should regulate his diet so as not to ag-

gravate the disease. He should neither partake of high seasoned or salted provisions, nor of strong liquors, but should chiefly live on vegetables, and confine his drink to table-beer, or mild ale. If wine is drank, it should always be diluted with water. In short, he who is afflicted with an obstructed liver must observe a rigid temperance as to diet. Late hours and night air are to be cautiously shunned. Moderate exercise taken daily when the weather will admit of it, will be salutary. If the patient is an inhabitant of a warm climate, a removal to a cold one will be advisable; and he will be likely moreover to derive additional benefit from the sea-voyage, but he should so regulate his plans as not to reach Europe in the winter season of the year.

Those who labour under any chronic affection of the liver will derive considerable relief from resorting to Cheltenham, and drinking the waters at the fountain-head. They excite a gentle but continued open state of the bowels, by containing salts of a purgative nature. These springs are indeed much resorted to by persons who labour under organic derangements in some part of the biliary system; but particularly where this has been induced by a long residence in the East or West Indies.

The Bath waters also afford relief to persons who labour under any derangement in the biliary organs of a chronic nature; but they would prove injurious where there is an inflammatory tendency, as in the acute species of the disease. Those who are affected with the former, whether brought on by a long residence in a warm climate or otherwise, and finding the functions of the stomach bowels weakened, will do right in drinking the Cheltenham waters in the summer months, and using those of Bath in the winter.

INFLAMMATION OF THE SPLEEN.

Like the liver, the spleen is occasionally attacked with chronic inflammation, and at length becomes enlarged and indurated. Now and then it proceeds on to suppuration, and forms an abscess. In the first stage of the disease, it has vulgarly been called an ague cake, as it is a frequent consequence of some long continued intermittent fever; but the disorder is produced by the several causes which have been enumerated as productive of a similar disease in the liver, and by none more generally, than by an immoderate use of spirituous or vinous liquors.

Treatment and Regimen.—The same regimen, medicines, and other means which have been pointed out in the preceding disease, must be employed in the one under consideration. The patient may also resort to Cheltenham in the summer, and Bath in the winter, and try the effect of the waters afforded by the springs at these places, for they will be likely to prove beneficial.

INFLAMMATION OF THE KIDNEYS.

Symptoms.—This disorder is characterized by an acute, pungent, or more frequently an obtuse or dull pain in the region of the kidneys, shooting along the course of the ureters, or ducts which convey the urine from them into the bladder; pain also in the small of the back, together with a fever, and frequent discharge of urine, which is small in quantitity, red and high coloured, yet in the highest degree of the disease, watery and limpid: the thigh feels benumbed, and there is a pain in the groin and testicle of the same side, together with a retraction. There are, moreover, continual eructations with bilious vomitings.

Causes.—The most common of these are acrid diuretics, as spirits of turpentine, cantharides, &c. external injury, long continued and violent exercise on horseback, gravel, or stones in the kidneys, collections of hardened fœculent matters in the intestines, retrocedent or misplaced gout, strains, violent exertions, an immoderate use of spirituous liquors, and the application of cold.

Inflammation of the kidneys is to be distinguished from that pain in the back, known under the name of lumbago, by the seat of the complaint discoverable upon pressure; by the frequent desire to make water, together with a difficulty in voiding it; and by the pain not being increased by a motion of the muscles.

A remission of pain, fever, and tension, followed by a copious discharge of high coloured, or mucous urine, and a general and equable perspiration are to be considered as very favourable appearances; whereas pale urine secreted in small quantity, a frequent desire to make water with difficulty in voiding it, sudden cessation of pain, severe shiverings, hiccups, cold extremities, or hectic fever supervening, are to be viewed in a dangerous light.

When the disease does not go off in the natural way, by a gradual abatement and amendment of the pain and febrile symptoms, it is apt to terminate in the formation of matter and an abscess, or in a mortification.

Treatment and Regimen.—This disease is to be treated as other inflammations, and therefore bleeding will be necessary at its commencement, repeating the operation according to the severity of the symptoms and the state of the pulse. After drawing blood from the arm, the topical abstraction of it, by the application of several leeches over the region of the kidneys, may be advisable in some cases.

In all, it will be proper to foment frequently with flannels, wrung out in a warm decoction of marsh-mallows and poppy heads. (See the Class of Emollients, P. 4.) The patient may also be placed for a quarter of an hour or so, twice or thrice a day, in a hip bath, or in the more general one, a warm bath. By way of internal fomentation, emollient clisters (See this Class, P. 2, or 3.) ought frequently to be administered.

Blistering should never be employed in this disease, being very apt to produce a strangury, by an absorption of the powder of the flies, of which the remedy is composed.

If the bowels are at all confined, they should be opened by a dose of castor oil or other mild aperient. See the Class of Laxatives, P. 6, or 13.

To abate the febrile heat and thirst, some medicine to excite a gentle perspiration (See the Class of Diaphoretics, P. 5, or 6) ought to be administered every four hours or so, the patient drinking freely and often of mucilaginous and diluent liquors, as barley water, linseed tea, or a decoction of marsh-mallows, to which may be added a little nitre.

When the fever has been moderated by the means which have been pointed out, we may have recourse to opiate clysters, (See the Class of Anodynes, P. 13), if the pain is excessive. In such a case it may be necessary to administer opium also by the mouth, and then about thirty drops of its tincture (laudanum) should be given in two table-spoonsful of any of the mucilaginous liquids before mentioned, adding also about fifty drops of the sweet spirits of nitre. Where the disease arises from gravel, or a stone lodged in the kidney or ureter (the canal that conveys the urine from thence to the bladder), the use of opium, both in clysters and by the mouth, is highly requisite.

Should the inflammation resist every endeavour to subdue it, and proceed on to suppuration and the formation of an abscess, which is known by an abatement of the pain, a remaining sense of weight in the region of the loins, frequent shiverings succeeded by heat, and whitish turbid urine, the patient must take balsamic medicines, (See this Class, P. 1), and likewise the Peruvian bark; but one of the best remedies that I know, is the dry and powdered leaves of the red berried arbutus or uva ursi, of which from half a scruple to half a drachm may be taken twice or thrice a day. Chalybeate waters, particularly those of the Hotwells and Clifton, near Bristol, may prove auxiliary means of relief if their use is persisted in for a due length of time. In all such cases, the diet should consist chiefly of mucilaginous herbs and fruits, together with the broth of young animals, made with a good deal of barley and pot herbs.

Persons who are apt to be afflicted with returns of obstructions or inflammation in the kidneys, should abstain from Port, or other wines abounding with tartar, and they should avoid all severe exercise, particularly on horseback. They ought also to guard against any exposure to cold, and wear flannel next to the body.

INFAMMATION OF THE BLADDER.

Symptoms.—Where this disease exists, an acute burning pain and some degree of tension at the bottom of the belly, with a constant desire to make water, a difficulty in voiding it, or total stoppage, a frequent inclination to go to stool, much unneasiness and

heat, a general febrile disposition, a frequent and hard pulse; sickness and vomiting not unfrequently attend.

Causes.—It is occasioned by an improper use of acrid medicines, such as cantharides; by the inflammation of a clap extending along the urethra or urinary channel; by permanent or spasmodic stricture; by local irritation, from the lodgment of a stone: by hardened fœces, or a diseased state of the prostate gland; (See this complaint under the head of a Difficulty and Suppression of Urine) and by mechanical injury, as well as by all the usual causes of inflammation.

Treatment.—We must employ much the same means in this disease as have been recommended in the former, with an exception to a copious use of diluent liquors, which ought only to be taken in moderate quantities where there is any suppression of urine. At the commencement, bleeding from the arm will be advisable, which may be followed by abstracting blood by means of several leeches applied to the perinæum, or that part which is situated between the organs of generation and fundament. The belly is, at the same time, to be fomented with flannels wrung out in warm water, or a decoction of marsh-mallows and chamomile flowers, and an emollient clyster (See this Class, P. 2 or 3) is to be injected from time to time. To dislodge any hardened feculent matter from the intestines a dose of castor oil should be administered.

To dilute the acrid urine retained in the bladder, it will be advisable, if the assistance of a surgeon can be readily obtained, for him to draw off what is in the bladder by means of an elastic gum catheter, and then to inject four or five ounces of tepid water through this, by means of a syringe or vegetable bottle, which operation may be repeated about twice in the twenty-four hours. No force should be used in passing the catheter, and where it can be easily introduced into the bladder, there is no means whatever so well calculated to produce a beneficial effect as washing it out in this manner.

As a medicine, the patient may take some diaphoretic (See this Class, P. 8 or 10,) every four hours, and where the pain is severe, six or eight drops of the tincture of opium may be added to each dose. To assist, a hip or warm bath morning and evening will be advisable.

Diluent liquors are to be used sparingly, particularly where there is much difficulty of making water, or a total suppression. Throughout the whole course of the disease, an abstinence from every thing of an acrid or stimulating nature is to be enjoined, the strength being supported by weak animal broths, gruel, arrow root, preparations of barley, &c. After it has gone off, the patient must carefully guard against exposure to cold, particularly getting wet in the feet, as well as every other cause likely to bring on a return of the complaint.

In consequence of repeated or continued irritation, produced ei-

ther by a stone in the bladder, a diseased state of the prostate gland, by stricture in the urinary passage, or other causes, it now and then happens that the mucous membrane of this organ has become thickened, indurated, or ulcerated, and that it pours out a good deal of mucus and purulent matter, which, by being mixed with the urine, gives it a whitish appearance somewhat resembling whey: at other times there is probably a discharge of blood.

The treatment in all such cases should be managed by giving balsamic medicines (See this Class, P. 1 and 2), as also the powder of the red berried arbutus (uva ursi), as mentioned under the preceding head; and to assist their effect, the bladder may be washed out occasionally by injecting it with about three or four ounces of tepid water, or lime water diluted with an equal quantity of common water, having the chill first taken off from it.

OF THE RHEUMATISM.

This is a very painful disease which affects the muscles and joints in different parts of the body, and, in many cases, so nearly resembles the gout as to be distinguished from it with difficulty. It makes its attacks in all seasons of the year when the atmosphere is moist and variable, but is more frequently met with in the autumn and spring. It is sometimes accompanied with fever, and sometimes there is none. In the former instance, it is known under the name of acute rheumatism: in the latter, it is called chronic rheumatism.

Symptoms.—The acute rheumatism generally commences with weariness and shivering, succeeded by heat, thirst, restlessness, anxiety, a hard, full, and quick pulse, and all the usual symptoms of inflammatory fever. After a short lapse of time, acute pain is felt by the patient in one or more of the large joints of the body, and these are followed by a tension and swelling of the parts so affected. The pain is apt to be transitory, and to shift from one joint to another, leaving the part it occupied, red, swollen, and very tender to the touch. The tongue is white, the bowels are obstinately costive in general, the urine is high coloured, the pulse full and hard; the blood, when drawn from a vein, exhibits a thick buffy coloured coat on its surface, as in pleurisy; and sometimes there is a profuse sweating, unattended however by any relief. When the patient is in bed, the pains are usually much increased, and he cannot bear the least motion without their being highly aggravated.

The chronic form of rheumatism may either be a consequence of the termination of the acute, or it may be independent of it. In the first case, the parts which are affected with inflammation, are left rigid, weak, and, in some instances, puffed up, and the pain not being moveable, is now confined to particular parts; sometimes, however, it shifts from one joint to another, but without being accompanied by any inflammation or fever. In the latter case,

where it has arisen from an exposure to cold and sudden vicissitudes of the weather, pains seize the head, shoulders, knees, loins, wrists, and other parts; and these often continue for a considerable length of time, and then go off, leaving the seat they occupied in a state of debility.

Causes.—Obstructed perspiration, occasioned either by laying in damp linen or damp unventilated rooms, wearing wet clothes, or being exposed to cold air, after having been much heated by exercise, or other ways, may be considered the chief and most frequent cause of the rheumatism.

The gout is the disorder which most nearly resembles the rheumatism, but in the latter, it is principally the large joints which are affected; moreover, the pain frequently shifts its seat, and follows the course of the muscles in its transition to other parts. Besides, it is not in general preceded by flatulency and indigestion, as is the case in gout; and it occurs at any period of life, whereas gout is usually confined to adults.

The deposit of a reddish sediment in the urine, or its becoming cloudy, with a general but gentle moisture on the skin, are to be regarded as very favourable appearances in acute rheumatism; but the inflammation assuming a dark red colour, followed by vesications, as in bad cases of erysipelas; the urine being pale, the febrile symptoms very high with delirium, or translations of the inflammation to the head, chest, heart, diaphragm, stomach, or other organs contained in the cavity of the belly, and producing the symptoms of the primary diseases of these parts, are to be considered as very dangerous.

Treatment and Regimen.—The first and great object in acute rheumatism is to lessen the inflammatiory action and lower the fever; for which purpose, it will be advisable to draw blood from the arm, and if the patient is an adult, from ten to twelve ounces may be taken away. If he is of a robut and full habit, this step would appear to be indispensible, and a repetition of the operation may be necessary after a lapse of twenty-four hours. Should the person be of a spare and delicate frame of body, it may be best to refrain altogether from opening a vein, and substitute the application of several leeches, or cupping with previous scarifications, to the part which is most inflamed and painful.

The next proper step to be taken, is to open the bowels freely by giving some aperient medicine, (see the Class of Laxatives, P. 5, 6, or 11,) occasionally resorting during the progress of the disease to clysters, for the purpose of dislodging and bringing off all feculent matter from the intestines. Where these are found ineffectual, the aperient medicine must again be administered.

To abate the fever, it will be advisable to determine the circulation to the surface of the body by medicines that excite gentle sweating, and none can be more appropriate than some of the preparations of antimony. (See the class of Diaphoretics, P. 1, 8, or 9.) When the pain is considerable, half a grain of opium may be added

to about three grains of antimonial powder, which may be made into a pill with a little confection of roses, and be taken every four or six hours; or we may add eight or ten drops of the tincture of opium to each dose of the other diaphoretic medicines referred to, (viz. P. 8 and 9), if the patient cannot take a pill. To assist the effect of these remedies, tepid diluting liquors should be drank frequently, adding eight or ten grains of nitre to each potation.

Where antimonials do not produce a good effect on a fair trial of those recommended, we may then substitute the compound powder of ipecacuanha, in doses of eight or ten grains, which should be repeated every six hours, washing down the medicine with three table-spoonsful of the saline mixture. See the Class of Diaphoretics, P. 5.

After proper evacuations have been premised, warm bathing, or a vapour bath, may be likely to produce a good effect, and will be found to assist the operation of the medicines just mentioned. Where the patient cannot bear to be moved from the severity of pain, flannel cloths wrung out in warm water, may be applied to the parts affected.

Warm fomentations have, however, been considered by some medical practitioners to aggravate the pains instead of relieving them; and therefore it may perhaps be better to moisten the parts frequently with some fluid made only of a tepid heat, and what I have found to answer best is a combination of the camphor mixture with rectified spirit, in the proportion of two parts of the former to one of the latter. Linen cloths wetted in this tepid liquor may be kept constantly applied over the inflamed and painful parts, re-wetting them as often as they become dry, and taking care that the superincumbent covering of the bed-clothes is light and cool. Cold applications have been sometimes used; but as rheumatism is a disease in which the inflammation is apt occasionally to be translated to a vital part, they had better not be used.

Where the pain is confined to one joint, and is not accompanied with much inflammation and swelling, we may direct it to be rubbed twice or thrice a day with some appropriate liniment. See the Class of Stimulants, P. 7, 8, or 9.

As soon as any remission of the accompanying fever takes place, or where there has been a copious perspiration, attended by a cloudy deposit or sediment in the urine, or where the paroxysms of the disease have been strikingly periodical from its commencement, we should then prescribe the Peruvian bark, either combined with nitre or ammonia, or alone; but it may be best during the first day or two, to add one or other of these remedies. About eight grains of either of them may be mixed with each dose of the bark, which may be given in substance to the extent of half a drachm each time, or in the form of decoction or infusion. See the Class of Tonics, P. 1 and 2.

In acute rheumatism, the patient should be confined to a very spare and light diet, consisting of gruel, chicken broth, panado,

bread puddings, roasted apples, &c.; and his drink should be diluting and cooling, as toast and water, thin gruel, whey, barley water, or a solution of preserved tamarinds, carefully abstaining from all fermented liquors.

The chronic rheumatism differs from the acute in its not being attended with fever or much inflammation, and the pain being usually confined to some particular part of the body, as the shoulders, arms, or loins; but it is apt to occupy those joints which are surrounded by many muscles, and particularly such muscles as are employed in the most constant and vigorous exertions. When it affects those of the loins, it is called lumbago; when seated in the hip joint, it is known by the name of sciatica.

In all cases of chronic rheumatism it will be advisable to rub the parts in which the pain is seated with strong volatile or other liniment, (see the Class of Stimulants, P. 7, 8, or 9,) three or four times a day, enveloping them afterwards in flannel or fleecy hosiery. It also will be of use to go into a warm bath every other night, for about a quarter of an hour. Where the patient is advanced in life, and his strength much reduced by the long continuance and severity of the pains, a tepid bath of about 90 degrees may be preferable to a warm one of from 111 to 114 degrees. If a vapour bath could be obtained, it might be preferable to the others, particularly in long protracted cases of lumbago and sciatica. Among the Asiatic nations, the operation of champooing is much resorted to immediately on coming out of a warm or vapour bath, and the process is very likely to afford relief in most cases of chronic rheumatism. It consists in pressing, squeezing, and kneading, as it were, by the hands of an attendant, the surface of the body, together with ablutions of it with warm water, the patient being placed in a recumbent posture.

The waters at Bath are much used in all cases of chronic rheumatism; but bathing in these waters is only proper where the disease is unaccompanied by inflammation, and in which the pains are not increased by warmth when the patient is in bed. In diseases of the hip joint which have been of long standing, bathing in these waters, aided by cupping, blistering, &c. has very frequently been attended with the most decided benefit and relief. In obstinate cases, particularly where the hip is affected, and these means do not afford much relief, issues made with caustic near the seat of the disease may be tried, together with electricity or galvanism.

The Buxton waters have also been resorted to with advantage by persons of a delicate and irritable habit, and by bathing in them the healthy action has been so far restored, as to enable the patient to use the more powerful remedy (for these waters are of a very moderate heat) of sea bathing, or the common cold bath.

Blistering the part is sometimes of service where the pain is fixed in any particular joint; but where it occupies many joints, or shifts from one to another, the remedy will not be likely to afford

relief, and we had better employ the stimulating liniments before mentioned. As a want of action is apt to induce stiffness in the limb affected, it will be of much importance to use exercise, either of the whole body, or of the particular limb which is the seat of the disease, after rubbing in the liniment. As an exercise of the arms, what are called dumb bells will be appropriate, and none will answer better than walking where the lower extremities are the parts affected.

Such are the external remedies to be employed in chronic rheumatism. Those to be used internally, are such as produce sweating, and which are at the same time of a stimulant nature, as preparations of gum guaiacum, volatile salts, Dover's powder (compound powder of ipecacuanha), and turpentine, with bark. See the Class of Sudorifics, P. 1, 3, 4, 6, or 7. These may be given combined as in the prescriptions referred to, and be continued for a sufficient length of time, that advantageous effects may be derived from them.

Should the patient's rest be much interrupted from the severity of the pains during the night, he may take a composing draught (see the Class of Anodynes, P. 7,) a little before he gets into bed.

The vinous tincture of the seeds of the meadow saffron (colchicum) given in the quantity of a fluid drachm twice a day, with about ten drops of laudanum in each dose, has been found to afford great relief in chronic rheumatism as well as in gout. See this disease. The meadow saffron is the active medicine of which that nostrum the Eau Medicinale consists, and which has been so much employed by gouty people; but it is supposed that the sliced roots are used in this tincture instead of the seeds. The latter are not, however, attended with any of those disagreeable effects which result from a use of the former, and ought therefore to be preferred.

Where there are grounds for suspecting that the pains experienced in chronic rheumatism are connected with some old venereal taint, a long continued course of mercury in small doses, assisted by drinking about half a pint a day of the compound decoction of Sarsaparilla, will be proper. See the Class of Alteratives, P. 5, 9, and 12.

In chronic rheumatism, but little change will be requisite in the patient's diet from his ordinary mode of living, unless it is somewhat intermixed with the acute, and he feels not only much severity of pain, but also a febrile disposition; in which case the diet must be pretty much the same as in the acute disease. For common drink he may take weak wine whey, or barley water with a little of the supertartrate of potash dissolved in it.

In all cases of both diseases, flannel or fleecy hosiery should be worn next to the skin, a flesh brush be used, and every precaution be taken to guard against exposure to cold and wet, and also to a moist or damp atmosphere. During the summer months, cold bathing may be tried, especially in the sea, as this often removes chronic rheumatic pains. If the appetite is impaired, stomachic bitters, or the bark with diluted sulphuric acid (see the Class of

Tonics, P. 7, 8, 9, and 10,) may be taken, as likewise the Bath water; and the effect of them may be greatly assisted by gentle exercise every day, and a pure dry air.

OF THE GOUT.

This disease is usually divided into the regular and irregular. When the inflammation occupies the joints to a due degree, and after a certain duration gradually disappears, leaving the health unimpaired, it is termed regular gout. Of the irregular gout there are three species, viz.—1st, the Atonic. Where there is not sufficient energy in the system to produce a proper degree of inflammation in the extremities, in consequence of which the general health is considerably affected; the stomach performs the office of digestion imperfectly, and the patient is troubled with flatulency, loss of apetite, eructations, violent pains of a spasmodic nature, and frequently with nausea, accompanied not unusually with dejection of spirits and other hypochondriacal symptoms.

2. The retrocedent. In this, the inflammation having occupied a joint, ceases suddenly, and is translated to some internal part, such as the head, lungs, heart, or stomach.

3. The misplaced, or where gout, instead of producing the inflammatory affection of the joint at all, seizes some internal parts, producing inflammation there, and giving rise to some symptoms which attend inflammations of those parts from other causes.

Symptoms.—An attack of regular gout sometimes comes on suddenly, and without any previous warning; but most usually it is preceded by a belching of wind, flatulency in the stomach and bowels, nausea, weariness, dejection of spirits, pains in the limbs, with a sensation as if cold water or wind were passing down the thigh; great lassitude and fatigue are felt after the slightest exercise, the bowels are costive, and the urine is of a pale colour.

The paroxysm most frequently comes on about two o'clock in the morning with excruciating pain either in the joint of the great toe, the heel, calf of the leg, or perhaps the whole of the foot; and this becoming more violent by degrees, is accompanied with shiverings, succeeded by heat and other febrile symptoms. The pain having attained its height towards the following evening, ceases gradually, a gentle moisture breaks out upon the skin, and the patient being greatly relieved from his torment, falls asleep, but upon awakening he finds the parts, before painful, now much inflamed and swollen. During several succeeding evenings there is a return of both pain and fever, and these continue with more or less violence during the night, and towards the break of day they subside and go off.

A fit of the gout consists of several such paroxysms as have been described; and although there may be some little alleviation in the symptoms after a day or two, still the pain and fever return every night, going off again the following morning. According to the

disposition of the body to the disease, the strength of the patient, and season of the year, will be the duration of a fit of the gout; but it usually continues at first for two or three weeks, and then goes off either by perspiration, an increased flow of urine, or some other evacuation; the cuticle or scarf-skin of the parts which have been affected, peeling off in branny scales, and some slight lameness and tenderness remaining for a considerable time.

In the atonic gout, if the head be affected, there is great pain there, with perhaps giddiness, and not unfrequently apoplectic and paralytic affections are the consequence. If the lungs, it produces an affection similar to asthma. If the heart, faintings, palpitations, and an intermittent pulse. If it is seated in the stomach, there is great pain, nausea, vomiting, flatulency, and eructations, dejection of mind, languor, want of energy, and apprehension of danger; and these are frequently accompanied with cramps in several parts of the trunk of the body and upper extremities. Sometimes there is obstinate costiveness; sometimes a purging.

In the retrocedent gout, if the disease is translated to the stomach, there is great anxiety, violent pain and vomiting, with a peculiar sense of cold over the region of this organ. If to the heart, there are faintings and palpitations. If to the lungs, asthma. If to the head, apoplexy and palsy.

In misplaced gout, instead of there being an inflammatory affection of the joints, the disease attacks some internal part, produces inflammation there, and then we meet with the symptoms specified as accompanying such an affection from an exposure to cold, or other causes. See Inflammation of the Brain, Lungs, Stomach, &c.

Attacks of gout usually become more severe during each returning fit, both as to the degree of pain as well as the number of parts which are affected. Probably it only seizes one foot at first, but afterwards both feet are affected by every paroxysm, the one after the other; and as the disease advances, it not only affects both feet at once, but after having ceased in the foot which was secondly attacked, again returns to the first, and perhaps a second time into the other. Sometimes it shifts its seat from the feet into the other joints of the upper and lower extremities; and in severe cases there is scarcely a joint of the body that does not in its turn feel its effects. Although two joints may be affected at the same time, yet it generally happens that the attack is only severe in one, passing successively from one to another, so that the sufferings of the patient are frequently prolonged to a considerable length of time.

At first, a gouty attack occurs probably only once in two or three years; it then comes on every year, till at length it becomes very frequent, and is not only of longer duration, but much severer each succeeding fit. After repeated attacks, the joints lose their flexibility and strength, and become so stiff as essentially to interfere with their performing the accustomed motions. On the joints of the fingers, little hard swellings or small nodes arise, chalky concretions are formed, and both the kidneys and bladder occasionally become affected with small stones of a similar nature.

Causes.—The attacks of gout are generally in the winter or spring, and are rarely met with before the adult age, or middle period of life. Persons of a full and robust habit are most subject to this disease, particularly those who live luxuriously, and lead an indolent inactive life; whereas those who are employed in constant bodily labour, and who live upon a vegetable diet principally, are seldom afflicted with it. Women are much less the subjects of it than men: no sex, age, or even youth, are, however, exempt from it; but in the latter case, it can only be ascribed to that predisposition or constitutional bias which is entailed by the parents of the child. An hereditary predisposition therefore, as also too free an indulgence in the use of animal food, fermented liquors, and venery, leading a sedentary and studious life, anxiety of mind, excessive evacuations, fatigue, the application of cold to the extremities, sprains, the ceasing of usual labours or accustomed exercise, indolence, and intemperance, are to be considered as the chief causes which are productive of gout.

The disease may, in general, be readily distinguished from rheumatism, by the pains attacking the smaller joints, instead of the large ones, as in the latter; by its not being accompanied or even preceded at its commencement with symptoms of inflammatory fever; and by the previous affection of the stomach with flatulency, eructations, and pain.

The fit is generally shorter in proportion to the violence of the febrile symptoms and the length of the intermission; its returns may be rendered milder when acquired, than when it proceeds from an hereditary bias, and the disease admits more readily of alleviation in youthful persons than in those that have attained an advanced period of life.

We are to consider an unimpaired constitution, with the tongue becoming moist and clean, the urine depositing a sediment, the appetite returning, and the local inflammation gradually subsiding, and not shewing a disposition to a quick transference from one part to another, or if it be fugitive, not fixing severely on new parts, as favourable occurrences. Whereas, on the contrary, an impaired constitution, or the disease suddenly receding from the extremities and attacking an important organ, as the brain, heart, stomach, &c. are to be viewed in an unfavourable and dangerous light. Where the system is greatly weakened from frequent and long continued fits of the gout, the patient is apt to be attacked with either palsy, asthma, or dropsy in some form or other, but more particularly an extravasation of fluid in the chest.

Treatment and Regimen.—In a regular fit of the gout the assistance of medicine is not in general requisite. All that may be necessary is to confine the patient, if young or of a full habit, to a spare regimen of light and cooling articles of food, and to drinks of a diluting and mild nature; but where the person is advanced in life, and accustomed to live high, the constitution being at the same time weak, we should then only enforce a more moderate regimen,

carefully abstaining from every thing that might add to the irritation, keeping him as quiet and still as possible, and taking care that his mind be not ruffled, but on the contrary, soothed and tranquillized as much as possible. At the same time that these particulars are observed, the inflamed parts are to be attended to: they ought to be kept *moderately* warm by wrapping them in flannel, fleecy hosiery, or wool, thereby exciting a perspiration on the part, and probably with a beneficial effect.

Many remedies have indeed been recommended to be applied topically, such as leeches, blisters, a tepid bath of water and muriatic acid, in the proportion of one ounce to a gallon of water, ice, and linen cloths wetted with very cold water, &c. but a frequent consequence of their use, particularly of the two latter, has been the translation of the inflammation to an internal organ of great importance. They cannot cure gout, but may remove it from a safer to a more dangerous part of the body, and thereby not unfrequently destroy the patient.

If he becomes uneasy under his sufferings and ventures on any external application, some benefit may probably be derived by constantly moistening the part affected with a tepid fluid, such as two parts of camphor mixture with one of rectified spirit, say twelve ounces of the former to six of the latter. This fluid should be made of a grateful warmth, so as not to be under 75, nor exceed 85 degrees; for if either hot or cold, the intention of the remedy will be frustrated, and it may be applied by linen cloths wetted therewith, taking care to rewet them as often as they become dry, and that the superincumbent covering be light and cool. This application I have tried several times, and the patients have derived much relief from it; in no case did any translation of the inflammation take place to an internal part. It is a remedy recommended by Dr. Scudamore in his valuable treatise on the gout.

To alleviate the pain and shorten the duration of the paroxysm, we may give such medicines as will excite and keep up a gentle perspiration. Antimonials, ipecacuanha in small doses, or volatile salines, (See the Class of Diaphoretics, P. 1, 2, 4, 7, 9,) assisted by diluting tepid liquors, will therefore be proper. An opiate at bed-time, according as the patient's rest is broken in upon by the pain, may be conjoined with these medicines. If we employ the antimonial powder or simple ipecacuanha powder, we can make up three grains of either of these into a pill, with half a grain of opium and a little syrup to form them; but if a preference is given to the volatile saline medicine (P. 7 or 9), about thirty drops of the tincture of opium may be added to the dose, which is taken towards the close of the evening.

Where costiveness prevails, the intestinal tube should be cleared of feculent matter by administering some aperient. See the Class of Laxatives, P. 1, 9, or 12. Such medicines are particularly necessary at the commencement of gouty paroxysms. Should these be accompanied by symptoms of indigestion, such as flatulency and

acidity in the stomach, half a drachm of magnesia with four or five grains of rhubarb, mixed up in a little peppermint water, may be taken twice a day to correct them.

A nostrum, under the name of the Eau Medicinale, has been a good deal used by gouty people during paroxysms of the disease, and in some cases it has afforded relief; but in others it has given rise to very alarming symptoms, such as a great depression of strength, excessive evacuations from the stomach and bowels, cold sweats, and faintings. The remedy has been found to consist of the common meadow saffron (colchicum), infused in Spanish wine or rectified spirits, two ounces of the roots cut into slices and macerated in the wine or spirits until the liquor is fully imbued with the properties of the former. As this preparation has sometimes been productive, however, of sudden or long continued and excessive action of the stomach and bowels, it has been recommended to substitute the seeds instead of the sliced roots, but in the same proportions as in the Eau Medicinale; and we are assured that they seldom fail of producing the desired effect, and invariably operate without the occurrence of any of those alarming symptoms so prevalent from using the roots. The dose of the wine of the meadow saffron should never exceed that of a liquid drachm, which had better not be taken oftener than twice a day in a little thin gruel or barley water, the patient at the same time abstaining from every kind of food which may be likely to prove flatulent, and if the bowels are costive, obviating this inconvenience by magnesia conjoined with a few grains of rhubarb. Under these restrictions and moderate doses, the remedy will be found perfectly safe, and to afford great relief in gouty paroxysms.

Such are the means to be adopted during the continuance of a regular fit of the gout, and the next object to be kept in view is, after it has subsided and gone off, to prevent or retard its return.

To effect this, the patient should lead a life of the strictest regularity, carefully avoiding those causes which have been enumerated as likely to excite the disease: his diet should be light and mild, with an abstinence from animal food of a high seasoned nature, but consisting a good deal of milk and vegetables. He should avoid all strong liquors, particularly those conjoined with acids (such as punch), and wines abounding with tartar. He ought to take regular, but moderate exercise every day; to employ frequent friction with a flesh brush or flannel; and to keep his bowels properly open by some gentle aperient, such as manna combined with rhubarb, or the like, (See the Class of Laxatives) when they do not act sufficiently in the natural way. To strengthen the whole system, he may employ tonics, chalybeates, and occasionally stomachic bitters, (See the Class of Tonics.) Bitters certainly give a temporary relief to persons whose stomachs are disordered by gouty attacks, but if their use is long persisted in, they have usually been found to produce a bad effect. The Portland powder, which is a compound of bitter herbs, was much used by gouty people some

years ago, but from having proved pernicious when long used, was laid aside. Where a use of medicine is, therefore, to be long persevered in, for the purpose of strengthening the stomach, and giving energy to the whole system, it will be most advisable, after a short time, to discontinue using bitters, such as gentian, calumbo, cascarilla, &c., as in the prescriptions referred to, and to substitute the Peruvian bark, or sulphate of quinine, and chalybeates, as specified in the Class of Tonics, P. 16, 20, 26, and 27. Gouty persons often receive benefit by taking soda water in the quantity of half a pint daily. If they make use of tea for breakfast or in the evening, a little powdered ginger may be added with advantage, particularly where there is flatulency, or pain in the stomach.

In the gout, the cardinal rules, in preserving health, are grounded on a strict temperance in all points, on moderate exercise taken regularly, and on the adoption of those means which are found to give strength and energy to the system, and the shunning those that are likely to enfeeble and injure it. Cheerfulness and serenity of mind, exercise suited to the capability and condition of the person, temperance in diet, and sensual gratifications, a moderate exertion only of the intellectual faculties, retiring to bed at an early hour, and rising betimes in the morning, paying at the same time a proper attention to the state of the bowels, are the likely means to invigorate the system; whereas, intemperance, indolence, late hours, intense study, particularly by night, great sensuality, severe evacuations, anxiety of mind, and earnest solicitude, will infallibly tend to enervate and injure it.

The treatment of irregular or atonic gout, should consist in carefully avoiding all causes likely to induce debility, such as too great exertions, bodily fatigue, too spare and vapid a diet, much indulgence in sensual gratifications, and indeed every kind of intemperance. Persons subject to such gouty affections should make a moderate use of animal food of a light and easily digestible nature, and wines that are least disposed to be acescent; hence Sherry or Madeira will be the most appropriate; but should these also turn acid on the stomach, then a little brandy, sufficiently diluted with water, may be substituted. The effects of cold are to be carefully guarded against by wearing flannel next to the skin, and by proportioning the quantity and quality of the clothes worn to the season of the year and the vicissitudes in the temperature of the atmosphere; a point not sufficiently attended to by many. Moderate exercise ought to be taken daily when the weather will admit of it, and a course of stomachic medicines, chalybeates or other tonics (see this Class) be entered upon, and continued for a due length of time.

In cases of irregular or atonic gout, if the patient's circumstances and avocations will admit of his resorting to Bath, the waters of these springs will be likely to prove a useful remedy, and they may be employed both externally and internally. Most probably they will bring on a general increase of action, indicated by a fulness

in the blood vessels, flushings in the face, and a relief of the affection of the stomach and other parts, and a regular fit of the gout will likely be the consequence.

In the retrocedent gout, where there is a translation of the disease to the head or chest, every method must be adopted to transfer it to the feet, and thereby relieve the internal organ so affected. These ought to be well bathed in warm water, and acrid cataplasms (see the Class of Stimulants, P. 13,) be applied to the soles. Blisters ought also to be put on the calves of the legs or ankles, and one on the back. Where the attack is so severe as to produce a high degree of delirium or stupor in consequence of the brain becoming affected, or where there is a danger of suffocation from the lungs being the seat of the disease, blood should be drawn from the arm; but in milder cases, it may be best to take it from the feet or ankles.

When the stomach is the seat of the disease, the warmest cordials must be administered freely, such as hot brandy and water, wine boiled up with cloves, cinnamon, and other spices, and æther with camphor and ammonia be given in frequently repeated doses. See the Class of Stimulants, P. 1, 3, or 5. Should these not afford relief, from two to three tea-spoonsful of ammoniated tincture of guaiacum, with an equal proportion of the camphorated tincture of opium, may be taken for a dose, mixed in a little brandy and water of a tepid heat.

At the same time that these medicines are administered internally, heat should be applied to the region of the stomach, either by means of woollen cloths wrung out in hot water, or by a bladder filled therewith, and heated tiles or bricks be put against the feet. It may also be of service to rub the region of the stomach well with strong volatile liniment; but should this not be at hand, equal parts of the spirits of hartshorn and brandy may be substituted. If any vomiting or distressing sickness at the stomach should take place, it may possibly be relieved by giving the patient a little wine diluted with warm water, and when these cease, recourse may be had to the camphor mixture with opium. About one ounce and a half of the former, with thirty drops of the tincture of the latter, may be taken as a draught, with the view of restoring the organ to tranquillity and alleviating the pain.

When the gout attacks the kidneys, or neck of the bladder, and thereby produces pains and other symptoms resembling gravel, the parts so affected ought to be well fomented with woollen cloths wrung out in warm water. An emollient clyster (see the Class of Emollients, P. 2 or 3,) ought likewise to be frequently injected, and to increase its effects, about thirty or forty drops of the tincture of opium should be added to each. The same quantity of laudanum may likewise be taken by the mouth in an ounce of camphor mixture, or any other liquid vehicle. The patient should also drink frequently some tepid diluting liquor, such as barley water, or a decoction of marsh-mallows.

In all cases of retrocedent gout, where, by a pursuance of the means which have been pointed out, we are so fortunate as to bring back the disease to the joints it originally occupied, as much care must be taken as possible to guard against any future translation of it.

The gout imitates several disorders, and by being mistaken for them, it occasionally is diverted from its regular course, and is then attended with some danger. Persons who are subject to the gout ought therefore to be cautious how they manage themselves about that season of the year in which it usually makes its attacks. Those who never have had the gout, but who from their manner of living, or constitutional bias to it, have reason to expect it, should be very circumspect with regard to its first approach, as by any improper conduct or treatment it might be diverted from its right course, and either give rise to pains in the stomach, head, or bowels, so as to render the remainder of life uncomfortable, or cause it to be thrown upon some vital part.

OF A COLD AND CATARRH.

The inhabitants of every climate are liable to take cold when the seasons are variable, and there are sudden and considerable changes in the surrounding atmosphere. Those are chiefly the subjects of it who are of a delicate constitution; whose employments expose them to quick transitions from great heat to a very reduced temperature, and who have a morbid susceptibility to the impression of cold, and are disposed to coughs.

Symptoms.—A cold is usually accompanied with a weight and pain in the head, oppression at the chest, and some difficulty of breathing, a sense of fulness and stopping up of the nose, watery inflamed eyes, soreness of the throat, cough, pains about the chest, cold shiverings succeeded by transient flushes of heat, rheumatic pains in the neck and other parts of the body, an increased secretion of mucus from the nose, throat, and lungs, in consequence of a slight inflammation of the mucous membrane of these parts, and in many instances with some degree of fever.

Causes.—The application of cold to the body, giving a check to perspiration, is the general cause of these complaints.

A species of catarrh, to which the name of Influenza has been applied, sometimes makes its appearance; and considering the manner in which the epidemic infection of this disease occasionally spreads, even over whole countries, in the space of a very short time, it is evident that it is conveyed by a current of the atmosphere, and derives its origin from some casual source capable of impregnating the air which we breathe with the specific poison of the malady.

A cold and catarrh are not accompanied with danger, when appearing under a mild form, and properly attended to at an early period; but when connected with highly inflammatory symptoms,

and these are not counteracted at the commencement by appropriate means, or there is a predisposition in the constitution to consumption, or a tendency to asthma, unfavourable consequences may result therefrom.

Treatment and Regimen.—When a person finds himself much indisposed from any exposure to cold, he ought immediately to put himself on a light spare diet, abstaining from the usual quantity of animal food at least, and from all fermented and spirituous liquors, together with every thing that is likely to heat and inflame the body. The best food for him will be gruel, weak broths, bread puddings, roasted apples, and the like ; and the most appropriate drink will be barley water, sharpened with the juice of lemon or oranges, a solution of preserved tamarinds in water, or lemonade. The patient in particular should avoid eating any supper except gruel, with a little bread. It will likewise be advisable that he be confined to the house, and not expose himself to the external atmosphere ; he should also be warmly clothed.

Previous to his going to bed, he had better put his feet into warm water for ten or twelve minutes, and after having them well wiped, he should take either two grains of antimonial powder, or about ten of the compound powder of ipecacuanha, mixed in a little gruel, washing down the medicine with a basin full of some tepid diluting liquor, such as barley water, and covering himself in bed with sufficient clothes, so as to excite a proper perspiration throughout the night. The next morning he ought to continue in bed longer than usual.

Should the bowels be in a confined state, it will be advisable to remove costiveness by some gentle aperient medicine, (see the Class of Laxatives, P. 6 or 12,) taken early in the day. At night, the feet may again be put into warm water, and either the dose of the antimonial powder, or that of the compound powder of ipecacuanha, be repeated. If these medicines do not excite a considerable degree of perspiration, we may substitute P. 6, 7, or 8, Class of Diaphoretics, assisting their intended operation by drinking freely of tepid diluting liquors. This plan, when duly persisted in for a proper time, will seldom fail to remove a slight cold, particularly if it be adopted at its commencement.

If the symptoms do not, however, yield to this management, and there be any tendency to inflammation in the chest, (marked by a difficulty of breathing and cough, heat and dryness of the skin, and a full, strong, and frequent pulse,) it will then be necessary to draw blood from the arm, proportioning the quantity taken away to the urgency of the symptoms, the habit of body, and age of the patient, and afterwards to give some cooling aperient medicine as before specified, resorting at night to the diaphoretic remedies and diluent drinks which have been pointed out as being the likeliest means of promoting a proper perspiration, the obstruction of which has given rise to the disease.

If there be any pain or uneasiness about the chest, or any ob-

struction in breathing, a blister ought to be applied over it, or on the back, but a preference had best be given to its being placed over the former.

To allay the irritation of the cough, it will be advisable, in addition to the diaphoretic medicines and diluent liquors, to give some mild pectoral from time to time. See the Class of Expectorants, P. 1, 3, or 4. After the inflammatory symptoms have subsided, we may prescribe a gentle opiate at bed time, if the rest is disturbed by night, (see the Class of Anodynes, P. 5,) or the patient may take two table-spoonsful every second or third hour of a mixture, consisting of one ounce of syrup of poppies, half an ounce of the oxymel of squills, and six ounces of mint or common water.

The evils resulting from a common cold, may in general be soon removed by confinement within doors, by taking a little appropriate medicine, and the observance of a proper regimen. Those who are very subject to the complaint should endeavour to avoid all extremes of heat and cold, and if the body be heated by exercise, exertion of any kind, or being for any length of time in a crowded room, theatre, or other place of public resort, they should be careful to let it cool gradually before they expose themselves to the external air, and never take any thing cold at the time by way of drink. They should also avoid sitting or standing near a draft or current of air, or near an open window; for although they may be refreshed and cooled at the time, very ill effects may soon afterwards become manifest. Additional covering should always be in readiness to put on previous to persons coming from crowded rooms or other such places into the open air.

When influenza makes its appearance as a prevailing epidemic, its treatment is to be conducted in a similar manner with that of catarrh.

OF A COMMON COUGH.

This complaint is generally the effect of an exposure to cold, which has either been neglected at first, or not properly treated. Under either of these circumstances, it often proves tedious, and not unfrequently is succeeded by pulmonary consumption, there being tubercles in the lungs from a scrofulous disposition, which inflame and proceed on to suppuration, or a small abscess forms in the lungs.

Where a cough is urgent, and accompanied either with pain or oppression about the chest, and the pulse is at the same time quick and hard, it will be advisable to have a vein opened in the arm, and from six to ten ounces of blood taken away; but if the person is of a weak delicate constitution, then under this circumstance it will be best to substitute the application of ten or twelve leeches to the chest, and should these not produce the desired effect, a blister may be applied in the immediate neighbourhood of the part.

When the expectoration is free, and a good deal of mucus is spit up, it would be improper to resort to bleeding in any way whatever, either topical or general.

If expectoration is scanty, or impeded with a tough, viscid phlegm, it should be promoted by pectoral medicines, such as squill, combined with gum ammoniac, &c. (See the Class of Expectorants, P. 1 or 2; or the patient may frequently take a tea-spoonful of either of the linctuses composed of honey and an acid, &c. as in P. 6 or 7.)

When what is spit up is thin and acrid, a use of mucilaginous medicines, such as a decoction of barley with liquorice, or a decoction of coltsfoot, or marsh-mallows, sweetened with honey, will be required, and about a small tea-cupful may be taken frequently. See P. 5, Class of Expectorants. At night, two tea-spoonsful of the compound tincture of camphor may be given in a wine glass full of the patient's ordinary drink, or in a little of the spermaceti mixture, P. 4 of the same Class. In such cases of cough, relief is often obtained by keeping some kind of pectoral lozenge, such as those of tolu or Spanish liquorice, or a little barley sugar, &c. constantly in the mouth.

If the cough does not yield to the means which have been recommended, but still continues obstinate, a blister should be applied to the chest, and be kept discharging for some time, by dressing it daily with the Spanish fly ointment. The application of a burgundy pitch plaster may be tried if the patient objects to the blister, but the latter is certainly the more efficacious remedy.

Many people are subject during every winter to a chronic, or habitual cough, attended with a shortness of breathing, wheezing, and an expectoration of viscid phegm, similar to what are observed in the pituitous, or moist species of asthma. In such cases, a table-spoonful of the mixture of gum ammoniac with squill (See the Class of Expectorants, P. 2) may be taken several times a day, inhaling now and then the steam arising from warm water with a little vinegar added to it.

When, on having taken a slight cold, a cough comes on, and this at length becomes somewhat habitual, accompanied with loss of appetite and a wasting of flesh and strength, there is reason to apprehend that it is the forerunner of consumption. In this case, a change of air, assisted by gentle exercise, a light diet consisting principally of vegetables, milk, fruit, &c. and the carefully guarding against all causes likely to aggravate the cough, will be necessary.

If a cough is only the symptom of some other malady, such as dropsy in the chest, asthma, worms, &c. our first object should be to remove the disease from which it proceeds, and then to attend to the cough if it remains.

During pregnancy, some women are apt to be afflicted with a cough: in such cases, all food of a flatulent nature ought to be avoided, the bowels be kept regular and open, and the dress be loose and easy. If the woman is of a full and robust habit, a little blood may be taken from the arm, probably, with advantage.

Persons liable to coughs from any little exposure to cold, should wear flannel next to the skin, but particularly over the chest; they should adapt their clothing to the vicissitudes of the weather, and they should be cautious how they expose themselves too quickly to the external air when heated by exercise or crowded rooms.

OF A CONSUMPTION, OR PHTHISIS.

Pulmonary consumption is a general wasting of the body, attended with a cough, difficulty of breathing, fever of the hectic kind, and generally with a spitting of purulent matter from tubercles in the lungs, or the formation of an abscess therein, in consequence of previous inflammation.

Symptoms.—When consumption arises from the latter of these, it is attended with the symptoms which have been enumerated under the head of inflammation of the lungs in the first place, and afterwards with a cough, spitting of purulent matter, and hectic fever, succeeded by universal emaciation; but when from tubercles, it is marked with the following symptoms, viz. there is a short dry cough, that is often so slight at first as not to excite the attention of the patient or those inmated with him. He becomes languid, and gradually loses strength, his breathing is easily hurried by the least bodily exertion, the pulse is small, soft, and quicker than usual, and at length, from any little exposure to cold or other exciting cause, the breathing is more anxious, a sense of tightness and oppression at the chest are experienced, the cough then becomes more troublesome, particularly during the night, an expectoration of a frothy mucus at first takes place, which is usually most considerable in the morning, and afterwards becomes more copious, viscid, and opaque.

As the disease advances, a pain is perceived in the chest or one of the sides, which is much increased on coughing, and sometimes becomes so acute as to prevent the patient from lying upon the side affected by it: the face now flushes, the pulse is quick and hard, frequently amounting to 120 or 130 strokes in a minute, the urine is high-coloured, and deposits a branny sediment, the palms of the hands and soles of the feet are affected with burning heat, the tongue, from being at first white, is now clean but red, and purulent matter is spit up from time to time after coughing. The symptoms suffer a considerable increase towards evening, and the fever now assumes the hectic form, having an aggravation of its symptoms twice in a day; the first about noon, which is inconsiderable and soon suffers a remission; the other in the evening, which increases gradually until after midnight. Each exacerbation or aggravation of the symptoms is usually preceded by some degree of shivering, and terminates in profuse perspiration.

During the exacerbations, a circumscribed redness appears on each cheek, but at other times the face is pale, the countenance dejected, and the blood vessels on the membranes of the eyes as-

sume a pearly white colour. Very soon a purging comes on, and this frequently alternates with profuse sweating. General emaciation takes place, the cheek bones are prominent, the eyes hollow and languid, the whole countenance indeed assumes a cadaverous appearance, the hair falls off, the nails are incurvated and of a livid colour, the legs swell, owing to the cellular membrane being distended with a watery fluid, and the mouth and throat not unfrequently are occupied by the thrush. Still, however, the appetite often remains good, and the patient has a craving for solid food, from which circumstance he is apt to flatter himself with the hope of a speedy recovery, and often vainly forms distant projects of amusement or interest, when at last death closes his existence.

Causes.—The ravages of pulmonary consumption seem particularly to take place in persons between the age of fifteen and thirty, although no period of life, from childhood to old age, is exempt from it. Young people of a slender delicate habit, with a long neck, flat and narrow chest, and high shoulders, are most predisposed to the disease. It has been computed that one in ten of the bills of mortality were composed of persons who died of this complaint; and its frequency in Great Britain may be attributed principally to the variableness of the climate, sudden transitions from heat to cold, and the increase of scrofula among its inhabitants. By some it has been attributed to the quantity of pit coal that is used for fuel, but I think erroneously.

I look upon the application of cold united to moisture, as by lying in a damp bed, wearing wet clothes, or suddenly exposing the body to cold air when it is preternaturally warmed by exertion or a crowded room, to be the most general exciting cause of pulmonary consumption; this giving rise to catarrh or other inflammatory affection of the lungs, which ultimately terminates in the formation of an abscess, or in causing tubercles in a scrofulous constitution to inflame and suppurate. These tubercles are, in general, met with under the form of hard substances, which, when cut into, appear to be solid bodies of a whitish colour, and each tubercle may be considered as a lympthatic gland in a particularly diseased state, which condition or state is the consequence of scrofula. Tubercular consumption may, therefore, be considered in every instance, as scrofula affecting the lungs.

Certain other preceding diseases, such as the rupture of a blood vessel in the lungs, small pox, measles, and a venereal taint, may however give rise to pulmonary consumption; as may also severe and depressing passions of the mind, as grief, disappointment, anxiety, or intemperance of any kind, profuse evacuations, as a purging, diabetes, the whites, immoderate flow of the menses, severe flooding after labour or a miscarriage, or the woman continuing to suckle too long under a debilitated state. The fumes arising from the fusion of certain metals and minerals, and the dust to which certain artificers are exposed, as millers, stone cutters, bakers, hair dressers, chimney sweepers, &c., are likewise to be

looked upon as causes which occasionally give rise to consumption.

It is readily to be distinguished from all other diseases by the hectic fever and purulent expectoration which attend it. True purulent matter is opaque, of a fetid odour, of greater specific gravity than water, sinking to the bottom of the vessel. Its colour is either white, yellow, or green: when dissolved in sulphuric acid, if water be added, it either falls to the bottom, or forms an intimate mixture, making the whole uniformly turbid.

Mucus is transparent, viscid, not miscible with water, and it does not smell: upon adding water to its solution in sulphuric acid it separates into small flakes, and floats upon the surface. Such are the tests by which any person may readily distinguish the real character of what is expectorated, and ascertain whether it is purulent or not.

Consumption is ever to be considered as a very dangerous disease, but still most so when arising in consequence of an hereditary predisposition, or from tubercles. An expectoration of purulent matter, high degree of hectic fever, great debility and emaciation, profuse sweats, purging, dropsical swellings of the legs, and the thrush, denote the certain destruction of life. A peculiar or chachehectic state is often the precursor of pulmonary consumption, and in the early stage of its existence is curable in a large proportion of instances; whereas the local disease to which this state leads, is wholly incurable.

Treatment and Regimen.—It is only in the early stage of pulmonary consumption that we should entertain any hope of removing it, or even warding off the disease to a distant period. As soon, therefore, as the patient is attacked by any symptoms that threaten the approach of the disease, it will be necessary for him to pay the strictest attention not only to his diet, but also the proper management of his person. With respect to the former, it should consist of a moderate use of animal food that is neither salted nor high seasoned, together with a due proportion of various articles of the vegetable class, allowing the latter greatly to preponderate. Oysters, lobsters, crabs, and other shell fish, may be partaken of. Ripe fruits, roasted, baked, or boiled, as apples boiled in milk, gooseberry and currant tarts, as likewise the jellies and preserves, &c., of subacid fruits, may also be eaten. All spirituous and vinous liquors had best be abstained from, and the common drink be confined to toast and water, mild table beer, imperial, soda water, and the like. If the patient has been accustomed to live high, and his spirits begin to suffer depression from such a change, he may be allowed a little wine sufficiently diluted with water, and made of a pleasant tartness by an addition of lemon or orange juice. Cows' milk being easier procured than that of the ass, may be used freely both as an article of diet and drink; and for the last purpose may be rendered lighter, and probably more salutary, by taking off the cream and then mixing it with an equal quantity of barley water.

As nothing tends more to aggravate the symptoms of a consumption than a desponding mind, brooding over real or perhaps imaginary calamities, every thing should as much as possible be avoided that may tend to depress the spirits; for which reason, cheerful society, music, cards, and every thing likely to inspire mirth, are highly desirable.

If the patient resides in a close situation or large town, he had better exchange it for one in the country where he can breathe a free pure air, and he should daily take as much exercise as his strength will admit of, except when the weather is unfavourable. The best exercise for him will be riding gently on horseback, but if the motion excited thereby is perceived to occasion fatigue, he must substitute the use of some kind of a carriage. In whatever way exercise is taken, the greatest care must be observed to guard against cold in any manner whatever, either by getting wet, or by any exposure to sharp winds, a moist atmosphere, or night air. Flannel should be worn next to the skin in winter, and this be changed for calico during the summer months if unpleasant.

Tubercles are evidently brought into action in cold climates during the winter, and their progress to suppuration retarded in the summer. If the patient's circumstances therefore will admit of his removing in due time (that is to say, in the early stage of consumption, and before suppuration and ulceration have taken place), he should go to a warmer climate. The Islands of Madeira and Malta present a mean temperature for the winter months, but Pisa, Nice, Villa Franca (very near the latter), and Hieres, are certainly the most desirable places on the Continent for consumptive persons, as there they enjoy both warmth and equality of temperature during the winter months, points of the utmost consequence to invalids.

A warm climate however is only advantageous in cases of incipient consumption, and therefore persons who have passed through the first stage will derive no benefit from a journey to the South of Europe. Such as are far advanced in the disease should never quit their own country; for, by leaving it, they will forfeit many comforts, and probably be deprived of the attention and society of their dearest friends, as well as the attendance of their professional men in whom they have been accustomed to repose with confidence. If they remain at home (which they had best do in all cases of confirmed consumption) they will avoid an exposure to much fatigue, as well perhaps as great anxiety of mind.

They may pass the winter months in the mild and sheltered vales of Devonshire, as at Sidmouth, or Torquay, or at Penzance in Cornwall. At these places the air is free and pure, and they are sheltered from cold bleak winds. By some physicians the last has been thought equal to any situation on the Continent: if so, those who labour under consumption need not exile themselves from their friends and native country to seek a very doubtful advantage among strangers in a foreign one.

Lady Morgan in her Italy, and Mr. Matthews in his Itinerary of an Invalid, both mention that to go to Italy with the hope of escaping the winter is a grievous mistake; and they greatly doubt whether it be worth while for an invalid to encounter the fatigue of so long a journey for the sake of any advantages to be found in it with respect to climate during this season of the year.

If the disease is so far advanced as to prevent the patient from going out of doors in the winter months and those of spring, he may confine himself to chambers heated from 62 to 65 degrees, which will be the most appropriate temperature; and for this purpose a Porcelain stove, like those of Germany or Russia, had best be employed, being preferable to one of iron on account of the unpleasant smell which is occasioned by the latter.

In the summer the patient may make short excursions from one watering place to another on the sea coast, carefully guarding against damp beds, or any other cause likely to be injurious. Whilst near the sea, he may find benefit from sailing about for some hours each day; but this should be in a decked vessel, that he may have a sheltered place to retire to in case of rain unexpectedly coming on. Sailing is indeed a remedy much extolled in consumptive cases, and those who have sufficient strength to undertake a tolerable long voyage, may avail themselves of it; but those who have not, as well as such as cannot absent themselves from home for any time, may substitute short trips occasionally.

The Hotwell waters and those of Clifton, both in the immediate neighbourhood of Bristol, have been much employed by consumptive persons; and in some cases of the incipient disease, patients no doubt have derived benefit from them. The salubrity of the air, the healthfulness of the situation, the beautiful views and rich landscapes which the surrounding country presents to the eyes, the exercise on horseback which such patients daily take, and the different amusements which are furnished at these places, very greatly assist the curative effects of these waters. A trial of them had therefore best be made.

The medicinal treatment of consumptive persons must be regulated by the circumstances of the case. If the disease bears no marks of a scrofulous tendency, is in its incipient stage, the patient young and of a full habit, and there is a pain or tightness about the chest, with a short dry cough, it will be highly advisable that he should lose a little blood, which operation may be repeated in a week's time if the symptoms are not considerably relieved.

Under similar circumstances, a blister to the chest will be proper, or it may be applied to the side if occupied by the pain. The state of the bowels will next require attention, and should they be confined some gentle laxative must be given, repeating this from time to time as the occasion may require.

In the beginning of the disease where there are inflammatory symptoms, with the view of preventing tubercles from forming, or if formed, to obtain their resolution, it will be advisable, in addition

to the means already pointed out, to give the patient small doses of the nitrate of potash conjoined with some medicine that will determine the circulation to the surface of the body and excite a proper perspiration, (See the Class of Antiphlogistics, P. 4), observing at the same time a spare regimen, and carefully abstaining from all spirituous, vinous, or other fermented liquors, as well as from every other exciting cause.

The frequent exhibition of an emetic in the early stage of consumption, has generally been found to produce a good effect; and of this class the sulphate of copper (blue vitriol) is the most proper and efficacious, as it excites vomiting easily and readily without relaxing the stomach or purging the intestines, which others of the usual kind are apt to do; objects of considerable importance in a medicine which there is a necessity for frequently repeating. This emetic should be taken at least twice a week, and the morning will be the best time. It will be advisable to begin with about four grains of the sulphate of copper dissolved in two ounces of common water, increasing the dose to ten or twelve grains the next time that the medicine is repeated, if the former is not found sufficiently strong. A vomiting is soon excited in the proper dose after being received into the stomach, on which the patient may drink a pint of water, but not more.

For the purpose of assisting expectoration, and appeasing the cough, some pectoral medicines should be taken from time to time, (see the Class of Expectorants, P. 1, 2, or 3,) the patient moistening his throat with a small mouthful of it when it becomes dry, or coughing takes place. He may likewise use the pectoral drink conformable to P. 5 of the same Class. Should the cough prevent his getting a proper share of rest by night, two tea-spoonsful of the syrup of poppies, or twenty drops of the tincture of opium, may be added to one ounce of either of the pectoral medicines, and be taken as a composing draught a little before bed time. Probably, the inhaling of the vapour arising from warm water, with a little vinegar added to it, several times throughout the course of the day, might greatly assist in promoting expectoration and somewhat tranquillizing the cough.

It is to be understood that these several means are equally applicable to cases where from an exposure to cold some degree of inflammatory affection of the lungs has ensued, and which we fear has a tendency to terminate in suppuration or the formation of an abscess, as where tubercles are known to exist. Such are the means to be adopted in the early stage of consumption, and before any symptoms of hectic fever have become apparent.

When they present themselves, our attention must be directed accordingly. It has been mentioned that besides flushings in the face, and burning heat in the palms of the hands and soles of the feet, the pulse is hard and rapid, beating from 100 to 120 or 130 in a minute. It is therefore a desirable object to reduce the number of pulsations, and the medicine which has been most

employed for this purpose is the purple foxglove (digitalis purpurea), the best preparation of which, after repeated trials that I have made with all of them in such cases, is the tincture. We should begin with a small dose, such as from ten to fifteen drops, repeated thrice a day, increasing it gradually until the energy and frequency of the pulse are reduced very considerably, say nearly to eighty strokes in a minute. Few patients of an adult age will bear more than twenty-five or thirty drops morning, noon, or night, and therefore it will be advisable not to exceed this dose, lest nausea, vomiting, giddiness, and a great depression of the vital powers should ensue. If any of these consequences succeed from the quantity of the drops specified, we should omit using the medicine for a few days, and again employ it in a smaller dose. As a vehicle to take it in, there can be none more appropriate than a wine glass full of barley water.

Prussic acid is another powerful sedative medicine, which exercises a high degree of influence over the pulse, by checking too rapid a circulation. It appears, indeed, of too active a nature to be entrusted to the employment of any other persons but those of the profession, who will cautiously watch the effects produced by it. If a trial is wished to be made of it, the dose for an adult should not exceed three drops, repeated thrice a day, and the best vehicle to give it in will be about one ounce and a half of the almond mixture, (see the Class of Expectorants, P. 1,) omiting the oxymel of squills contained therein.

In the advanced stage of pulmonary consumption, the patient is usually much distressed and weakened by excessive sweatings during the night. These should be checked and counteracted by vegetable and mineral acids, and other proper remedies. Thirty drops of diluted sulphuric acid in two ounces of a simple infusion of the leaves of the red rose may be taken three or four times a day for this purpose in the form of a draught, together with two pills of iron and myrrh made up conformable to the directions of the Dispensatory of the London College of Physicians, being nearly similar to Dr. Griffith's celebrated anti-hectic medicine, but in a more agreeable form to the taste of the patient. The Peruvian bark being a good tonic, might be supposed a suitable remedy to administer the acid in, particularly the decoction or infusion of it, but it is apt to occasion a tightness at the chest and increase the difficulty of breathing. It may, however, be tried in cases where the morning remissions of the fever are considerable, and the exacerbations at noon well marked.

A purging is another troublesome and exhausting affection attendant on an advanced stage of consumption, and it is very apt to alternate with the colliquative sweating; for as soon as the one is stopped, the other too frequently comes on, producing thereby an extreme degree of emaciation and debility. Here it will be necessary to have recourse to opium conjoined with astringents, (see this Class, P. 5, 6, or 7,) supporting the strength at the same time

by preparations of arrow root, sago, rice, &c. as recommended under the head of Diarrhæa.

To appease the coughing and promote expectoration, the pectoral medicines advised in the incipient stage of the disease may be continued. Should the former be accompanied by pain in the side or chest, it will be advisable to apply a blister near the part affected, and when this heals up, to have recourse shortly to another, as more relief is usually derived from a frequent renewal of the application than by keeping up a discharge from the blistered surface by means of any stimulating ointment.

If a spitting of blood arises in consumption, besides keeping the patient in as quiet a state as possible, and his drinking every thing cold, we may give him the acidulated infusion of roses, and if this does not stop the hemorrhage, we may conjoin the following. Take two grains of superacetate of lead, half a grain of opium, and as much confection of roses as will form a pill of a moderate size, which may be given four times a day, washing it down with about two ounces of the above infusion. The other means pointed out under the head of a bleeding from the lungs (Hæmoptoe), may also be adopted, if found necessary, or the others are of no avail.

In the advanced or last stage of pulmonary consumption, the mouth and throat, and indeed the whole alimentary tube, are not unfrequently occupied with little ulcerations, or the thrush. In the former instance we may recommend the following gargle to be used three or four times a day. Take honey of borax half an ounce, decoction of bark or infusion of roses five ounces, and tincture of myrrh one ounce. Mix them well together.

To expect that a cure can be effected in the advanced stage of consumption, arising from the suppuration of tubercles, would require greater confidence in the power either of nature, or medicine than they are entitled to; and ninety-nine cases out of a hundred will terminate fatally, in defiance of the most able advice and assistance; but in the incipient stage of the disease, we may certainly be able to prevent the formation of tubercles, or if already formed, possibly prevent their proceeding on to ulceration. The case is somewhat different where an abscess is formed in the lungs from previous inflammation; for patients do now and then recover, if the contents of the abscess, on its breaking, are freely discharged by the mouth, and three instances of this nature have fallen under my care within the last twelve months; but in many cases the patient is either quickly suffocated, or the ulcer goes on corroding, until it has penetrated the coats of some large blood vessel, and a profuse hemorrhage takes place, by which the patient is soon destroyed.

If the abscess should discharge itself into the cavity of the chest between the lungs and pleura (the membrane which envelops these and lines the inside of the ribs), there is no way to evacuate the matter but by an operation, to perform which the aid of some skilful surgeon will be required. Very little danger attends the eva-

cuation of the purulent matter by such an operation; but it is a misfortune that it is seldom submitted to until after a lapse of some time, when the lungs have suffered too material injury ever to be restored to a healthy state again.

OF A BLEEDING FROM THE NOSE.

Symptoms.—The complaint is often preceded by a sense of weight, or dull pain in the head, redness of the cheeks, inflation of the face and of the vessels of the neck and temples, ringing in the ears, prominence and dryness of the eyes, giddiness, itching of the nostrils, costiveness, diminished secretion of urine, coldness of the extremities, and disturbed sleep, which are after a time, succeeded by a flow of blood from the nostrils; but in many cases, this takes place at once without any previous warning.

Causes.—Persons about the age of puberty, as also in the decline of life, but more particularly the former, are very apt to be attacked with a bleeding at the nose. The same happens in persons of a full robust habit of body, and those who labour under any peculiar weakness of the vessels of the part. The complaint in such is readily induced by external heat, some violent exertion, particular posture of the body, as in stooping, by picking the nose, and by blows, or other external violence.

This disease is seldom attended with danger unless when it arises in some putrid disorder, or when it takes place at an advanced period of life, flows profusely, and returns very frequently. In many instances it is to be regarded as salutary, particularly in inflammatory affections, and in fevers where there is a considerable determination of blood to the head. It may also prevent an attack of apoplexy in persons of a full and robust habit. It will, therefore, be of the utmost consequence to observe, whether a bleeding from the nose does not relieve any bad symptoms, or prevent some worse disease, as well as that it does not proceed so far as to endanger the person's life.

Treatment.—If the patient be young, and of a full, robust habit of body, and the system not sufficiently unloaded by the discharge from the nose, blood should be drawn from the arm in a quantity proportionable to the strength and pulse; after which, it will be advisable to open the bowels by some cooling aperient medicine. See the Class of Laxatives, P. 11 or 12.

When the complaint occurs to persons in perfect health, and of a sanguine full habit, and is, at the same time, accompanied with pain or fulness in the head, or when it takes place in any inflammatory disease, it should not be interfered with as long as the patient is not weakened and debilitated by it; but in those cases where it continues so as to sink the pulse, and occasion faintness with sickness at the stomach, or where the discharge is not critical, or arises in a person of a weak delicate frame, we should endeavour to stop the hemorrhage as speedily as pos-

sible. To effect this, the patient should be placed in an erect position with the head somewhat reclined backwards, be freely exposed to cool air, have his head immersed from time to time in cold water impregnated with a little common salt, and the genitals affused with the same. A strong degree of pressure may be applied at the same time on the nostrils from which the blood issues, with the finger covered with a linen cloth, moistened in vinegar and water, after which, lint rolled up in the form of a dossil, and dipped in powdered alum or charcoal, or else moistened in a styptic solution, (See the Class of Styptics, P. 2, 3, or 5), should be introduced.

It may be of service at the same time to administer eight or ten grains of nitre, dissolved in a little cold water, as a refrigerant every hour or two whilst the bleeding continues; but should this fail in producing the desired effect, a wine glass full of an infusion of the red rose, with twenty or thirty drops of diluted sulphuric acid, may be administered every hour. If these remedies are not at hand, the patient may drink common water acidulated with lemon juice or vinegar.

It sometimes happens that although the hemorrhage ceases outwardly, it nevertheless continues inwardly, and prevails in so high a degree as to threaten suffocation, particularly if the person falls asleep. In such cases, the passages may be stopped by introducing a pliable probe up the nostrils, through the eye of which, strong threads have been passed, 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 tightness.

The patient must be kept very cool and quiet, nor should he stoop much, or use any bodily exertion. He should refrain from removing the clotted blood, till it comes away of its own accord, and avoid picking his nose. If dossils have been introduced up the nostrils, they ought not to be suddenly withdrawn. When in bed, the head should be somewhat more elevated than usual.

To prevent recurrences of the complaint in such persons as are frequently attacked by it, nothing should be worn tight about the neck, the body should be kept cool, and as much in an upright posture as possible, and the feet be put frequently into warm water, for the purpose of determining the circulation from the head to the lower extremities. Where it occurs in persons of a full sanguine habit, a frequent use of some cooling purgative, with a spare diet, may tend to prevent any return of the complaint. When occasioned by too great a determination of blood to the head, and marked by preceding throbbing of the temples and giddiness, the application of leeches to the forehead, or of the scarificator and cupping glasses to the nape of the neck, will be advisable. If it is attributed to a suppression of some accustomed discharge, such as menstruation, or the bleeding piles, this ought to be restored, if possible. Should it arise from a thin diluted state of the blood, or be accompanied with any appearance of a

putrid tendency, then every thing of a restorative and invigorating nature must be resorted to. The Peruvian bark, with a few drops of diluted sulphuric acid administered with each dose, should be prescribed, together with a proper quantity of wine daily, the diet being at the same time rich and nourishing, consisting of strong broths, jellies, sago with spice and wine, arrow root, &c.

OF A SPITTING OF BLOOD.

Symptoms.—In this species of hemorrhage the blood discharged comes from the lungs, and therefore is often frothy, and brought up with hawking, or more or less of coughing, being not unfrequently preceded by a sense of weight about the chest, or pain, difficult respiration, and the spittle having a saltish taste. At other times, it is ushered in by lassitude of the body, costiveness, flatulency, coldness of the extremities, or slight shiverings, and perhaps a hard jerking pulse. The blood which is spit up is sometimes thin, and of a florid red colour; but at other times it is thick and of a dark red or blackish cast, according as it has lain a longer or shorter time in the lungs before it was discharged.

Causes.—A spitting of blood most usually occurs between the ages of sixteen and thirty-five, and may be occasioned by a variety of causes, such as a fulness of habit, violent exertions either in jumping, raising heavy weights, wrestling, singing long, speaking loud, or blowing wind instruments; as also by blows on the chest, much coughing, hectic fever, breathing air which is too much rarified for properly expanding the lungs, irregular living, the suppression of some accustomed discharge, such as the menstrual, or bleeding piles, and from previous inflammation of the lungs or weakness of the vessels thereof.

Persons of a slender make and lax fibres, who have long necks, and narrow chests, are somewhat predisposed to attacks of a spitting of blood. It has been observed that those who have been subject to a bleeding at the nose when young, are afterwards very liable to a discharge of blood from the lungs.

A spitting of blood may readily be distinguished from a discharge of it from the stomach, as in the latter, the quantity is usually more considerable, more grumous, and of a darker colour, and being at the same time intermixed with the contents of the organ: moreover it is generally unattended by coughing, whereas when the discharge comes from the lungs it is brought up by hawking or coughing, is usually of a florid red colour, and mixed with a little frothy mucus or spittle.

The blood spit up being small in quantity, and of a bright red colour, its not being attended by cough, difficulty of breathing, pain or other affection of the lungs, and not arising from an hereditary predisposition or faulty formation of the organs of respiration, are to be considered as favourable circumstances; on the contrary, the reverse of these are to be regarded in a very unfavourable light.

Treatment and Regimen.—To remove this disease, the patient must avoid every bodily exertion, and every occasion that might excite the passions. He should be kept perfectly quiet and cool, and as silent as possible. His diet ought to be very light, and rather spare, consisting wholly of vegetables, gruel, panado, custards, bread puddings, roasted apples, &c. He must abstain from all fermented liquors, and his drink consist of barley water acidulated with lemon juice, solutions of preserved tamarinds in water, whey, buttermilk, &c., all of which should be taken cold, and in small quantities at a time.

Where there is an inflammatory disposition in the constitution, indicated by a hardness and peculiar jerk in the pulse, the person of a full plethoric habit, and the blood which is spit up from the lungs, of a florid colour, it will be advisable to open a vein in the arm; but where the blood is of a dark colour, the person advanced in life, or debilitated from recurrences of the hemorrhage, or any previous disease, bleeding would be very improper.

It will, however, be necessary, in all cases, to keep the bowels open, by giving some mild aperient (See the Class of Laxatives, P. 6 or 10) every second or third day, and during the intermediate days the patient may take some refrigerant medicine (See this Class, P. 3, 4, or 5) every three or four hours during the continuance of the hemorrhage, drinking from time to time cold water acidulated with lemon juice, or a few drops of diluted sulphuric acid. Cold lotions with a sponge dipped in vinegar and water, or in a solution of common salt in water, may also be employed to the chest.

Should these means fail in stopping the hemorrhage, recourse should then be had to active astringents, such as alum and the superacetate of lead. Of the former of these, eight grains may be given for a dose, dissolved in an infusion of roses; and of the latter, from one grain to two, with the fourth of a grain of opium, formed into a pill with a little of the confection of roses, which may be taken three or four times a day. If the spitting of blood resists these also, it may be advisable to try the sedative effects of foxglove, of the tincture of which, from fifteen to twenty drops may be administered in a little cold water, three or four times during the twenty-four hours. Under a failure of all the means which have been suggested, a trial may be made of the nostrum known by the name Ruspini's Styptic.

If there be any considerable oppression about the chest, with a difficulty of breathing, and a teazing irritating cough, a blister ought to be applied over it, and this be kept open for some time with the ointment of Cantharides. To moderate the cough, some balsamic, mucilaginous medicine (See the Class of Expectorants, P. 1 or 3) should be taken from time to time, adding a little syrup of poppies, or about thirty drops of the tincture of opium to the dose which is given at bed time, if the patient's nights are restless.

To prevent returns of the hemorrhage, particularly in those who

are subject to it, it will be necessary to avoid all vigorous exertions of the body, agitations of the mind, and other exciting causes, adhering strictly at the same time to a diet that is light, cooling, and easily digested. Swinging, sailing, travelling in an easy carriage, and riding gently on horseback, will be the most appropriate exercises.

OF A VOMITING OF BLOOD.

Symptoms.—This disease is often preceded by a sense of weight and obtuse pain, or anxiety in the region of the stomach, and then follows an hemorrhage of dark coloured grumous blood from this organ, mixed with alimentary matter, and thrown up by vomiting. It is unattended by any cough.

Causes.—It may be occasioned by external violence, obstructions in any neighbouring organ, tumours compressing the liver or spleen, a suppression of some accustomed evacuation, such as the menstrual flux or bleeding piles, or by any thing received into the stomach, which stimulates or corrodes its coats. The disease is, however, more frequently symptomatic than a primary affection. It is apt to arise towards the close of the malignant scarlet fever, and worst kind of typhus, where symptoms denoting putrescency prevail in a high degree, and in such cases is to be looked upon as denoting a fatal termination.

Treatment and Regimen.—If the disease is accompanied with inflammatory appearances, and the pulse is full and strong, the patient may be bled with advantage, but not otherwise. As long as the discharge of blood continues, it would be improper to give any purgative medicine; but it will be advisable to open the bowels, and dislodge the coagulated blood by frequently administering an emollient laxative clyster. See the Class of Laxatives, P. 16.

During a continuance of the vomiting, we may give from one to two grains of superacetate of lead, with half a grain of opium, made into a pill with a little crumb of bread, and this may be repeated every four hours, washing it down with a small quantity of acidulated infusion of roses, or even cold water. Should this remedy not be attended with the desired effect after the lapse of a few hours, we may substitute the tincture of the muriate of iron, in doses of from twenty to thirty drops, in a wine glass full of cold water, to be repeated every hour or two until the hemorrhage ceases, and if this also fails, we may then make trial of Ruspini's Styptic. In very severe attacks, the application of a blister over the region of the stomach sometimes produces a good effect.

When the disease has arisen from a scirrhous affection of the liver or spleen, we must resort to a use of hemlock, joined with the quicksilver pill (see the Class of Deobstruents, P. 8,) keeping the bowels open by administering now and then some proper aperient. See the Class of Laxatives, P. 5.

To guard against any recurrence of the vomiting, it will be ne-

cessary as soon as it has ceased, that the patient should keep himself very quiet and still, carefully avoiding every kind of irritation. If he experiences any griping, occasioned by the acrimony of the coagulated blood in the bowels, some mild aperient should be taken, and be repeated after one or two days, if circumstances point out its necessity.

OF VOIDING BLOOD BY URINE.

This is rarely, if ever, a primary disease, but is commonly a symptomatic complaint, arising from some external injury by blows, bruises, or a fall; by some violent exertion, as lifting a heavy weight, jumping, or hard riding, or from a small stone lodged either in the kidney, or the duct for conveying the urine from thence to the bladder, and which, by its irregularity, or size, wounds or lacerates the surface of the part in which it is lodged, or through which it has passed.

If the blood proceeds immediately from the bladder, in consequence of a stone contained in it, it is generally accompanied by a sense of heat and pain at the bottom of the belly, and occasionally, much difficulty in making water. When a discharge of blood proceeds from the kidney or urinary ducts, and is occasioned by a rough stone descending from thence to the bladder, it is accompanied by an acute pain and sense of weight in the back, and a difficulty in voiding urine.

The deposit of clotted blood at the bottom of the chamber-pot in this complaint, and its staining linen of a red colour, will enable us to distinguish it from the high coloured urine attendant on many diseases. The voiding of bloody urine denotes danger, but it is particularly so when mixed with purulent matter, as it then points out that there is ulceration in some part of the urinary passages. Nor is the danger less when it has been produced by wounds or bruises of the kidneys. When it takes place in the course of any malignant disease it shows a putrid state of the blood, and is to be considered as a fatal symptom.

Treatment and Regimen.—If the disease has proceeded from any external injury, as a fall or blow, the patient should be bled, particularly if he is of a full robust habit, after which some gentle purgative may be given, and none can be more appropriate than castor oil, of which, from six drachms to one ounce will be a sufficient dose. The body may afterwards be kept open by emollient and aperient clysters.

If the hemorrhage continues we must have recourse to cooling medicines, (see the Class of Refrigerants, P. 3, 4, or 5,) and if these do not put a stop to it, astringents of a mild nature must be substituted. See this Class, P. 10.

When the disease arises from irritation of the kidney by a stone, besides giving medicines proper for that complaint (see Gravel and Stone) the patient must drink freely of mucilaginous liquors,

such as a solution of gum acacia in barley water, linseed tea, or a decoction of marsh-mallows, sweetened with a little honey. His diet must at the same time be light and cooling, and he should be kept as quiet as possible. If attended with acute pain, an emollient clyster, with about thirty drops of the vinous tincture of opium may be administered twice or thrice a day, and a composing draught (See the Class of Anodynes, P. 5) be given at bed time. When there is reason to suspect an ulcer in the kidneys or bladder, (purulent matter being intermixed with the urine,) about half a drachm of the dried leaves of the red-berried arbutus (uva ursi) may be taken twice or thrice a day, the patient using at the same time the double acidulated soda water in the quantity of a pint daily. When bloody urine proceeds from a dissolved state of the blood, as is sometimes the case in the confluent small pox, malignant fever, &c. a liberal use of Peruvian bark, with mineral acids, wine, &c. as recommended in the treatment of these diseases, must be resorted to.

OF THE BLEEDING AND BLIND PILES.

Symptoms.—The piles consist of small tumours situated on the verge of the fundament, which are sometimes round, prominent, and distinct ; but at others, run into each other. When there is a discharge of blood from the swellings, particularly on going to stool, the complaint is known under the name of the bleeding piles ; but when there is only a swelling or tumour, without any discharge of blood, it goes under the appellation of the blind piles.

A flow of blood from the fundament, and proceeding from piles, is not always to be considered or treated as a disease : on the contrary, several disorders, such as the hypochondriac, colic, inflammatory fever, gout, and asthma, are much relieved by it, and in some cases, it proves critical, like a bleeding from the nose, and carries off the complaint. It sometimes happens that the piles are accompanied by a sense of weight in the loins and back, together with flatulency in the bowels, and a pain or giddiness in the head. Sometimes the tumours are considerable, and from pressure against the bladder, occasion much irritation and difficulty in making water. A pungent pain is experienced in the fundament on going to stool, and small tumours may be felt projecting beyond its verge. Should these break, blood is then discharged, and the patient is relieved from pain ; but if they remain perfect and no blood flows, much agony is felt during every motion, and much inconvenience is experienced by sitting down on a common seat.

Causes.—The piles may be occasioned by costiveness, either habitual or improperly neglected ; by a frequent use of purgatives of a drastic nature or containing aloes ; by living on food highly spiced and seasoned ; by too great a fulness of blood, and an

inactive life; by hard and continued riding; by the suppression of some accustomed evacuation; and by pregnancy, as women during this state from the pressure of the womb upon the rectum (that portion of the gut just within the fundament) are often troubled with them.

Little or no danger usually attends on the piles; but in some cases a considerable degree of inflammation occupies the tumours, and this going on to suppuration, sinuous ulcers, and a fistula, are the consequence.

Treatment and Regimen.—To treat the piles judiciously, we should consider the cause from which they have arisen: if from costiveness, the bowels should be kept open and regular by a proper use of some gentle aperient. See the Class of Laxatives, P. 10 or 14. This will be particularly necessary in all cases of the blind piles. If the tumours are very painful and much inflamed, blood may be drawn from above the protruded parts by the application of half a dozen leeches, or from the loins by cupping; and probably a temporary relief may be afforded by puncturing the tumours with a lancet, so as to unload their distended vessels, or evacuate the blood effused. The parts may then be soothed by the application of linen rags wetted in a cold decoction of poppy heads, or common water, to which a few drops of a solution of the subacetate of lead have been previously added. After each motion or stool the patient should smear the tumours which protrude with a little emollient ointment, consisting of equal parts of spermaceti cerate, and that of the acetate of lead, half an ounce of each, and half a drachm of opium, well mixed together.

Thirty or forty drops of balsam of copaiba, swallowed morning and night, will frequently relieve the pain proceeding from piles. Small doses of nitre mixed with sulphur (such as eight of the former with twelve of the latter), and taken twice a day, will be likely to prove beneficial in robust and plethoric habits.

It has already been remarked, that the bleeding piles are in many cases to be looked upon as salutary, and therefore the discharge should not be stopped injudiciously. It is only where this is excessive, and exhausts the strength of the patient that the aid of medicine and other remedies are requisite. When this is the case, and the hemorrhage proceeds from tumours seated high up the gut, some astringent injection (See the class of Astringents, P. 17, 19, or 20) may be thrown up three or four times a day, the patient using inwardly at the same time, the acidulated infusion of roses, &c. as in P. 10 of the same Class. Both as a tonic and astringent, the Peruvian bark will also be proper. Half a drachm of the powder may be taken thrice a day in a glass of Port wine, with the addition of a few drops of diluted sulphuric acid. In all cases, confinement in a recumbent position will be advisable. Costiveness must be removed by some gentle laxative.

When the bleeding proceeds from tumours situated externally, and proves excessive and debilitating, pledgets of linen wetted in

a strong decoction of galls, or oak bark, may be kept constantly applied to the parts, smearing them occasionally with an ointment, consisting of two drachms of powdered oak gall, one drachm of opium reduced to powder, and one ounce of the cerate of super-acetate of lead, or that of spermaceti.

If the hemorrhage is very considerable and resists these means, we may make trial of pressure, by introducing up the fundament, a piece of sheep's or pig's gut tied at one end, and so filling it at the other extremity with cold water, and forcing up the liquid.

The diet of persons afflicted with the piles should consist of such things as are cooling, but at the same time nutritive and strengthening. Bread, milk, vegetables, broths, and light animal food, &c. are the most proper. The drink may be lemonade, toast and water, solutions of preserved tamarinds in water, whey, thin gruel, chalybeate waters, &c. avoiding spirituous liquors and all spices. It will also be right to shun all violent exertions both mental and muscular, particularly much riding on horseback.

The piles are sometimes so troublesome, and project so much beyond the verge of the fundament, as to require their being removed, either by a ligature applied round them, or by excision; but their removal with the knife is preferable to ligature, as serious consequences have not unfrequently ensued when the latter mode of treatment has been adopted.

By not paying a proper attention, piles are apt to produce a fistula, shewing itself by staining the person's linen. Ward's paste and other nostrums have been much employed in the early stage of this complaint, and occasionally with advantage; but no reliance can be placed on any mode of treatment, except on the proper operation, which tends to reduce the ulcer to the state of a simple wound, and gives an opportunity of applying proper dressings to it. It should, however, be resorted to in due time, and not be deferred until the constitution is undermined by the disease being of a long standing, and extending in various directions through the cellular substance surrounding the gut within the fundament, and forming new openings. The assistance of a skilful surgeon had, therefore, best be resorted to at an early period of the complaint.

OF THE BLOODY FLUX OR DYSENTERY.

Symptoms.—This disease sometimes comes on with cold shiverings, succeeded by heat and other febrile symptoms; at others, the local affection is first perceived. There is unusual flatulence in the bowels, costiveness, severe griping pains, a frequent inclination to go to stool without the ability of voiding any feculent matter, except in the form of small hard lumps, loss of appetite, sickness at the stomach and vomiting, frequency of the pulse and febrile heat. There is also a frequent discharge of a peculiarly fetid matter from the fundament, varying in appearance, consist-

ing sometimes of pure mucus, or mucus mixed with blood, and at others, of pure blood, or of a thin putrid matter, proceeding from ulcerated parts, accompanied with a sense of burning or intolerable bearing down of the parts, known under the appellation of tenesmus. If the disease is very severe, or continues long, then great emaciation and debility ensue, the pulse becomes quick and weak, hiccups arise, and not unfrequently a fatal termination ensues.

Causes.—These are great moisture, quickly succeeding to intense heat, unwholesome and putrid food, noxious vapours and exhalations. Exposure to cold or wet, occasioning an obstruction of the perspiration, may now and then give rise to dysentery; but it is frequently produced by contagion, and neglect in not paying strict attention to cleanliness and a free ventilation; hence it spreads rapidly in jails, hospitals, camps, and on ship board, when many persons are crowded together. Not only the effluvia arising from the bodies of those who labour under the disease, but likewise from their stools, will prove infectious. Dysentery may, I think, be considered as sometimes contagious and sometimes not so, according to circumstances; which circumstances are principally found in crowded hospitals, prisons, and ships, &c. where strict cleanliness is not attended to. There is reason to believe that the disease has rarely assumed an infectious character until after it has prevailed for some time and attacked a considerable number of persons; that is, not until the atmosphere has become charged with the effluvia emanating from the bodies of the sick and their evacuations.

The disease is most prevalent in the autumn and spring, and in marshy countries, where it is apt to become epidemic when hot days are succeeded by cold nights. Spasmodic constriction and ulceration of the large intestine, known by the name of the colon, is the immediate effect of the complaint. During the rainy season of the year in the West Indies (that is, in the months of August, September, and October), dysentery is very apt to break out, particularly among the negroes. It likewise prevails much in the different factories on the coast of Africa, and in low unhealthy districts in the East Indies, in the neighbourhood of jungles or marshes. Some derangement in the biliary organs is mostly connected with the dysentery of tropical climates. In some instances, there are evident symptoms of an inflammatory affection of the liver and this disease existing together from the beginning to the termination of the case: in others, the liver affection precedes the rise of the flux; and again in others, it follows in succession. Authors who have written on the dysentery of India, describe the stools as being liquid and copious, very frequently bilious, and seldom or never containing small lumps of hardened feculent matters, symptoms very different from dysentery as it is met with in other parts of the world. The dysentery of India seems, indeed, not to differ from the bilious fluxes so commonly met with there, and appears to arise from an affection of the liver.

The disease which most nearly resembles dysentery is that known under the name of diarrhæa or purging; but it may readily be distinguished from this by the appearance of blood in the stools, and the presence of tenesmus and fever, none of which are to be met with in the latter.

When dysentery arises from the common causes; the strength not greatly reduced; a gentle moisture comes out on the surface of the body; the stools become less frequent, more yellow, and of a natural appearance, and the urine deposits a sediment, we are to consider these symptoms as denoting a favourable termination of the disease. On the contrary, its having been of long duration with great prostration of strength and emaciation; its being attended by violent and distressing gripings, vomitings, difficulty of swallowing, apthous ulcerations in the mouth and throat, cold and partial sweats, extreme fetor in the stools, involuntary evacuations, preternatural dryness and redness of the tongue, and delirium, are to be looked upon as dangerous symptoms. Cold extremities, intermitting pulse, purple spots on different parts of the body, hiccups, or convulsions, are the fore-runners of death.

This disease attacking the old and delicate, or such as have been previously debilitated by any lingering disease, but more particularly the scurvy, or its being complicated with an affection of the liver or intermittent fever, &c. render its attacks very dangerous.

Treatment and Regimen.—It seldom happens that an inflammatory disposition prevails in dysentery; the fever which accompanies it mostly assumes a putrid tendency, and therefore the treatment for typhus will, in some measure, be requisite. As the first step, it will be advisable to give an emetic of about a scruple of ipecacuanha in the evening, working it off with chamomile tea. On the succeeding morning, some mild aperient medicine (See the Class of Laxatives, P. 2 or 13,) should be taken; and with the view of bringing the motions more to a natural consistence and appearance, and dislodging the hardened balls of feculent matter from the intestines, this medicine should be repeated every other day for three or four times.

It will be a desirable object to determine the circulation to the surface of the body, and promote a gentle perspiration by a frequent use of some medicine that will excite a slight nausea but not vomiting; and none has been found so beneficial and appropriate as small doses of ipecacuanha. Three grains of the powder may be taken every four or six hours in any vehicle, such as a solution of arrow root, &c.

If, after a fair trial of the simple powder, the patient does not derive that benefit from it which is desired, we may then substitute the compound powder of ipecacuanha, in the dose of four grains, made up into a pill with a little of the confection of roses, repeating it every four or five hours. This is an excellent diaphoretic medicine; it contains a small proportion of opium, and was formerly known by the name of Dr. Dover's powder.

After sufficient evacuations by laxatives and a use of the above medicines for two or three days, we may venture to give some mild opiate by the mouth, (see the Class of Anodynes, P. 5) and if this does not allay the gripings and frequent inclinations to stool, a clyster, consisting of a thin solution of starch, or fat mutton broth, with thirty or forty drops of the vinous tincture of opium, may be administered. If judged necessary this may be repeated after a lapse of some hours.

To assist in removing the griping pains and soreness in the belly, it may be fomented frequently with flannels wrung out in a warm decoction of bruised poppy heads, previously adding a small proportion of camphorated spirits thereto. Between whiles, we may direct the regions of the belly to be rubbed with an embrocation, consisting of two ounces of compound soap liniment, and half an ounce of tincture of opium.

Throughout the whole course of the disease a strict attention to diet must be paid by the patient, and he should carefully abstain from every thing that has a tendency to turn rancid or putrid on the stomach, such as animal food, butter, and fish of all kinds. Good broths, jellies, custards, light bread puddings, sago, arrow root, or rice boiled in milk, flour made into pap with a little wine and nutmeg added to it, apples boiled in milk, &c. will be the best articles to support the strength with.

In the dysentery accompanied with symptoms of putrescency, a moderate use of any subacid fruits, such as currants, strawberries, gooseberries, grapes, and oranges, in a perfectly ripe state, will be likely to prove beneficial, but they should not be taken to excess. For common drink, barley or rice water sweetened with preserved tamarinds, thin gruel with a small quantity of the supertartrate of potash dissolved in it, or toast and water, may be taken.

One of the most general causes of dysentery being obstructed perspiration, every means which may have a tendency to restore, and afterwards keep this up, ought to be employed. For this purpose, the patient should wear flannel next the skin over every part of the body, and he should be very cautious how he leaves it off, even on the approach of summer.

Throughout the whole course of the disease the patient's mind should be cheered and supported, and every encouragement be held out to him of the disease terminating favourably, and that a cure will be effected.

Another highly important point to be attended to is cleanliness in every respect. The patient's body linen, as well as that of his bed, should be changed frequently, and the stools be removed at a distance as soon as voided, and then be quickly buried. The chamber should be kept freely ventilated, by a fresh current of air being allowed to pass through it, and, from time to time, it ought to be sprinkled with warm vinegar or camphorated spirits of wine. To prevent infection from being conveyed to the attendants of the sick, and purify the surrounding atmosphere, it will be advisable,

in addition to the above means, to fumigate the place with the vapours arising from the muriatic or nitric acid, in the manner advised in page 65 of this work.

By an early and persevering attention to the means which have been pointed out, as well as to the diet, the disease probably will be subdued; but if we are disappointed in our expectations, we must resort to the aid of astringents, (see this Class, P. 2, 5. 6, or 7,) substituting one for the other, if not found to restrain the number and the nature of the stools. We must also employ tonics, such as calumba, cascarilla, simarouba, and angustura barks, various prescriptions containing which will be found under the head of Tonics (see this Class), and according to circumstances, and the exigency of the case, some preparation of opium may be added to each dose, or only occasionally. At an advanced period of the disease, when the frequency of the stools seems rather to proceed from a weakened and relaxed state of the bowels than from any remains of malignancy, both the astringents and tonics which have been pointed out will be appropriate medicines.

The propriety of administering Peruvian bark in dysentery has been doubted by some physicians; but I am of opinion that its use may be particularly serviceable in those cases where the accompanying fever assumes the remittent form, or where the disease is complicated with typhus or intermittents. It may be given conjoined with snake root. See the Class of Tonics, P. 8.

The occasional use of lime water, to the extent of half a pint a day, with an equal proportion of milk, will be a good auxiliary remedy in long protracted cases of dysentery. Nitric acid conjoined with opium has been attended with benefit in similar cases. Mix two drachms of nitric acid in two ounces of water, and add forty drops of the tincture of opium. Of this about a tea-spoonful, diluted with a small tea cup full of barley water, may be taken by the patient morning, noon, and evening.

In the dysentery of India, where the disease is kept up by a relaxed state of the bowels, the nitric acid thus administered has proved a good auxiliary remedy. Where there is a dusky sallow hue of the countenance, tenderness in the region of the liver upon pressure, and a clayey appearance of what feculent matter is occasionally voided, manifesting the presence of a diseased or obstructed state of the liver, mercury should be given, and be pushed to such an extent as to keep up a gentle affection of the mouth until the symptoms are mitigated. (See the Class of Alteratives, P. 7 or 8.) In India the practice of administering mercury in all the stages of dysentery is much adopted; but there usually exists a deranged action in the biliary system of persons who reside there to sanction a use of mercury in this way: the case is very different, however, among the inhabitants of Northern climates.

Persons who have been cured of the dysentery are very liable to relapses; to prevent which, it be necessary to pay the strictest attention to diet. They should live principally on vegetables, and

milk conjoined with rice, arrow-root, sago, &c., abstaining from much animal food and fish, and from all fermented liquors. A moderate use of wine diluted with water may prove serviceable during the state of convalescence. Such persons should also wear flannel next to the skin, go warmly clothed, and carefully avoid exposure to cold, wet or damp air, or sudden changes of the atmosphere. If they can select their abode, it ought to be in a situation where the air is dry and wholesome.

To assist in strengthening the whole body, such gentle exercise, either on foot, horseback, or in a carriage, as the strength will admit of, should be taken daily when the weather is fine, and a course of stomachic bitters (see the Class of Tonics, P. 7, 8, 10, or 11,) be entered upon and continued for some time.

OF NERVOUS DISEASES.

OF THE NIGHT MARE, OR INCUBUS.

Symptoms.—This unpleasant and distressing affection always attacks the person during sleep, and if this is profound the first approach of the fiend is usually in the shape of a disagreeable and frightful dream. He perhaps supposes himself in great danger, or pursued by an enemy whom he finds it impossible to avoid. He frequently feels as if his limbs were confined and deprived of motion. After a time the uneasiness of the patient rapidly increases, he feels oppressed with a sense of weight on the chest, impressing him with the idea of some living being that is seated thereon, inspiring terror, impeding respiration, and paralyzing all the voluntary muscles. The sensation is highly distressing and painful, he becomes every instant more awake and conscious of his situation, he makes violent efforts to move his arms with the view of throwing off the incumbent weight, but all to no purpose; he moans sadly, his heart is sometimes affected with palpitations, but generally moves with additional velocity, the difficulty of breathing goes on increasing, the eyes are half open, and the countenance puts on a ghastly appearance.

If the person is left undisturbed, he generally lies in this state for two or three minutes, when all at once he recovers the powers of volition, upon which he either changes his position instantly, so as to awake himself thoroughly, or he jumps out of bed in a violent fright. When this is not done, the paroxysm or fit is very apt to return immediately or very soon, as there is an irresistible propensity to sleep, which, if yielded to, is very likely to be productive of another attack.

When the disease is fully established, some confusion of ideas, singing in the ears, and spectral visions before the eyes will frequently remain for a time after being roused; and there will also be an unpleasant taste in the mouth, weight at the stomach, palpitations of the heart, and an accelerated pulse.

Causes.—The disease is most frequent among persons of a nervous temperament, and those who are studious or lead an inactive life. It seems principally to arise from indigestion, being usually accompanied with flatulency in the stomach and bowels, acid eructations, and costiveness. Nothing is more likely to produce an attack of the night mare than going to bed soon after having eaten a hearty supper, and particularly of food of an indigestible or flatulent nature. It never takes place but when the person is lying on his back. Great anxiety, abstruse thinking, or any thing that oppresses the mind, may be considered also as exciting causes of the disease.

The night mare has generally been looked upon as a trifling complaint, unattended with danger; but it is by no means improbable that some of those persons who have been found dead in their beds, have been destroyed by it. Those who are subject to attacks of this disease should therefore have some person to sleep near them, that they may be immediately awoke on their moaning or making a noise during the fit, as the uneasiness goes off as soon as the patient is roused.

Treatment and Regimen.—Persons subject to the night mare should abstain from all kinds of food which is either difficult of digestion or apt to prove flatulent, particularly for supper; they should take regular and sufficient exercise throughout the day, court cheerful society, and avoid gloomy contemplations and intense study, with late hours.

Those who are young and full of blood, if liable to attacks of night mare, ought to keep their bowels very open by some proper aperient, such as half a drachm of magnesia with a few grains of rhubarb. Where, on the contrary, there is much languor and debility with impaired appetite, the patient may commence a course of tonic medicines and stomachic bitters. See the Class of Tonics.

If there is considerable flatulence in the stomach, in addition to these medicines, a few grains of powdered ginger mixed with a little magnesia or carbonate of soda, may be taken at bed time in a glassfull of peppermint or common water. Acidity in the stomach is productive of the worst species of dreams and the night mare; and nothing will so effectually prevent, as well as remove, such crudities, as a little of the carbonate of soda taken at this period.

If the patient is of a nervous temperament, thirty drops of the ammoniated tincture of valerian, in an ounce of camphor mixture taken twice a day, will be likely to prove beneficial.

On recovering from an attack of the night mare, or being roused therefrom by an attendant, it may be advisable, if the patient seems distressed by flatulency or uneasiness at the stomach, to give him a draught consisting of an ounce of peppermint water, three drachms of the compound tincture of cardamoms, and ten grains of the carbonate of soda or magnesia, repeating it as the occasion may seem to require. If these medicines are not at hand, a tablespoonful of brandy or any other cordial may be substituted.

OF FAINTINGS OR SWOONINGS.

In these complaints there is a diminished action of the heart and lungs, and not unfrequently, a seeming cessation of the pulse and respiration during the continuance of the attack.

Symptoms.—This commences with a remarkable anxiety or oppression about the heart, followed as it were by a sudden extinction, not only of the animal powers and actions, but also of the vital, so that there is apparently a sudden and total suspension of all the functions of the system. The patient becomes pale and cold, the pulse is weak, the motion of the heart tremulous, and the breath scarcely perceptible.

When the swooning is perfect, no signs of life can be perceived for the time, the face becomes of a deadly paleness, the eyes are closed, the mouth either gaping wide open or shut, the extremities are cold, the limbs stretched out and inactive, and the strength suppressed; but as soon as the person begins to recover, he fetches heavy and deep sighs.

Causes.—The causes of faintings are violent and sudden emotions of the mind, pungent and other odours, indigestion, debility excited by preceding diseases, the loss of a considerable quantity of blood, a polypus in some of the large blood vessels or heart, aneurism, ossification, nervous affections, breathing air that is deprived of its proper elasticity, great fatigue, long fasting, &c. Persons of a delicate constitution are very liable to faintings or swoonings.

These complaints are seldom dangerous when duly attended to, and not arising from a diseased state of the heart, or large blood vessels immediately connected therewith; but they frequently prove hurtful, nay sometimes fatal, when wholly neglected or improperly treated. Sometimes an attack is accompanied by vomiting, and occasionally by an epileptic fit or other convulsive motions.

Treatment.—When a person falls into a swoon, the first step to be taken is to remove him to an airy place, and to have his face and hands sprinkled with vinegar or cold water, taking care at the same time to loose any part of the clothes that may appear tight, and to place him in an horizontal posture. After proceeding thus, the nostrils and temples may be stimulated with volatile spirits or salts, the extremities be well rubbed with soft flannel or a flesh brush, and as soon as we perceive that the patient begins to recover, and to be capable of swallowing, a glass of wine, or a little of any other cordial, may be given. If none is at hand, fifteen or twenty drops of the spirits of hartshorn, in a little common water, may be substituted.

The fit being gone off, the exciting cause should be attended to, and this be removed if possible. If the person is of a robust habit and full of blood, and has been overcome by a redundancy thereof, it will be advisable to open a vein and take away a proportionate

quantity; but it had best not be resorted to during the continuance of the fit, unless particularly required by the urgency of the symptoms. If the attack should appear to be owing to indigestion or other affection of the stomach, a gentle emetic may be given.

If the fainting is connected with any nervous affection, which is very frequently the case, relief is to be obtained by placing the patient during the fit in an horizontal posture, admitting cool air freely to him, and by stimulating the nostrils with a little volatile spirit. When he comes to himself, an ounce of camphor mixture, with five and twenty drops of the ammoniated tincture of valerian, may be administered as a draught. The same means are to be adopted when fainting has been occasioned by mixing in a very crowded assembly, which is apt to happen to persons of a delicate constitution, particularly in warm weather.

When the disease arises from great prostration of strength and debility, or defective excitement, the body or system should be strengthened not only by a generous and nutritive diet and wine, and exercise in a carriage, but also by a course of tonic medicines, particularly the Peruvian bark or stomachic bitters, conjoined with diluted sulphuric acid and chalybeates. See the Class of Tonics, P. 7, 8, 9, 10, 19, and 20. If the season of the year will admit of cold bathing, this may prove a good auxiliary remedy.

If fainting has arisen from any violent emotion of the mind, as grief, sudden surprise, fear, or the like, the patient had better be kept still, and during the continuance of the fit, have the nostrils and temples stimulated by the application of volatile spirits or salts. When he recovers, thirty or forty drops of æther may be given in an ounce of camphor mixture or common water.

In the treatment of swoonings or faintings, we should always keep in view the avoiding whatever appears to have been the exciting cause, as frequent returns are not only distressing to bystanders, but are very injurious to the constitution of those persons who are afflicted with them.

GIDDINESS IN THE HEAD, OR VERTIGO.

This affection may either proceed from a sudden determination of blood to the head, or too great a fulness of the vessels thereof; or it may be symptomatic of indigestion, the hysteric, hypochondriac, or some other nervous disease.

The person is seized suddenly with a swimming (as it is termed) in the head, every thing seems to him to go round, he staggers, and is in danger of falling down. When the complaint has arisen from an overfulness of the vessels in the head, it is sometimes preceded by a throbbing sensation, and a diminution or defect in the sight.

When it has been occasioned by this cause, and is not properly attended to, or relieved by due evacuations, it is apt to give rise to a fit of apoplexy, which either quickly destroys life, or on going

off leaves some paralytic affection behind. When a giddiness in the head prevails as a symptom of some nervous disease, little or no danger is to be apprehended.

Treatment.—Either general bleeding by opening a vein in the arm or neck, or topical by the application of the scarificator and cupping glasses to the nape of the neck, or of several leeches to the temples, together with a frequent use of some cooling purgative (see the Class of Laxatives, P. 6, 9, or 11), and a spare diet ought to be employed where a giddiness in the head has been occasioned by an over-distention of the vessels with blood. Should these means not remove the disease, although repeated, it may be requisite to insert a seton in the neck, or issues between the scapulary bones or shoulders.

When vertigo prevails only as a symptom of some nervous affection, as the hysteric, hypochondriac, or indigestion, we must then prescribe medicines and remedies which are appropriate to the removal and cure of the primary disease.

OF INDIGESTION, OR DYSPEPSIA.

Symptoms.—This disordered state of the stomach is marked by flatulency in a high degree, acidity, and not unfrequently heartburn, defective appetite, costiveness, giddiness in the head, and sometimes imperfect vision, ringing in the ears, and palpitations of the heart. The mind, in such cases, is frequently desponding and irritable, and a peculiar degree of anxiety is perceptible in the countenance. During the night the patient is restless, he moans in his sleep, has frightful dreams with startings, and does not feel refreshed in the morning by any rest he may have had. Slight exercise produces considerable fatigue, his spirits are depressed his pulse is small and frequent, and he is much distressed by distentions of his stomach and bowels, together with a rumbling noise in the latter, the obvious effects of wind. In some cases, where the complaint has been of a considerable standing, there is severe pain in the stomach, and occasionally there is a discharge from the mouth of a watery fluid.

In disordered states of the stomach there is usually a foul or furred tongue, its cuticle becomes permanently white and loses its natural colour, there is a disagreeable taste in the mouth every morning, and notwithstanding the greatest care, the breath frequently acquires an unpleasant smell. In some cases of disordered digestion, although the appetite is not greatly impaired, and the patient can take his meals readily, still he does it without much gratification or relish for his food. Those who are hard drinkers are not unfrequently troubled with occasional nausea and vomiting in the morning, and such as have greatly injured their constitutions by intemperance experience an unpleasant thirst, with loss of appetite and strength, shortness of breath, languor, paleness of countenance, and dropsical swellings towards the close.

Causes.—Intense study, inactivity of body, uneasiness of mind, grief, love of an absent object, profuse evacuations, a poor vapid diet, excess in sensual gratifications, hard drinking, particularly of spirituous liquors, great irregularity of life, late hours, an immoderate use of tea, coffee, tobacco, or opium, frequent over-distention of the stomach by food, a deficiency in the secretion of bile, or the gastric and pancreatic juices, a diseased state of the liver or spleen; other disorders, such as the hysteric and hypochondriac, chronic weakness, scirrhus of the lower or upper orifice of the stomach, &c. may be considered as the most usual exciting causes of indigestion or dyspepsia.

When the disease is a primary affection and not connected with any other, it has been supposed by some eminent physicians to consist in a morbid fulness of the villous or interior coat of the stomach. In general, it is symptomatic of an organic affection of the liver or spleen; but it may occasionally be produced by too sedentary a life, the depressing passions, and intense study, particularly by night, whereby the patient retires to bed at a late hour for a constancy.

If indigestion and other dyspeptic affections have been of long standing, so as to induce considerable debility, and give rise to dropsy and other diseases, or if they have originated from a scirrhosity of the lower orifice of the stomach, or pylorus as it is termed by anatomists, or, indeed, from any ulceration of its coats or upper aperture, they will ultimately be attended with fatal consequences, as happened in the case of General Napoleon Buonaparte; but if they are of short duration, and have arisen from an impaired action of the stomach in consequence of intemperate habits or improper medicines, they may be greatly alleviated, although probably not entirely removed, by abstaining from the exciting cause or causes.

Treatment and Regimen.—The indications to be attended to in all cases of dyspeptic affections, are to avoid and remove the exciting causes of the complaint; to obviate the symptoms which contribute to keep up or aggravate it, and to restore due energy to the stomach, so as to enable it to perform the office of digestion properly and with due effect.

If the patient, therefore, has given way to a life of intemperance, he must relinquish this, he must shun late hours, luxurious tables, and alluring amusements, forsake the haunts of dissipation, become temperate in all his habits, rise early, use moderate exercise, court the pure air of the country, pleasing occupations, and the society of a few select but cheerful friends.

To counteract the symptoms which tend to continue or aggravate the malady, it will be necessary that the bowels are kept open by some mild aperient medicines, such as small doses of the neutral salts in solution, (See the Class of Laxatives, P. 4, 5, or 6,) if they do not act properly; instituting also a regular custom of periodically soliciting evacuations by voluntary and persevering efforts. Persons of a costive habit ought therefore to visit the temple of Cloa-

cina every morning at a certain hour, and persevere in endeavouring to excite the bowels to action for at least a quarter of an hour each time, should no disposition to motion previously take place.

For the purpose of correcting the morbid acidity in the stomach, and also the flatulency, it will be advisable when the patient is distressed by these, to obviate them by some appropriate medicine. (See the Class of Carminatives, P. 4, 6, or 7.) He may also carry about him a few lozenges of ginger or peppermint, and take one or two of these occasionally when oppressed with a sense of distention in the stomach and bowels arising from flatulency. To assist in expelling the wind from the stomach and bowels, these may be rubbed externally every night and morning whilst in bed, with some stimulating liniment or embrocation. See the Class of Stimulants, P. 7, 8, or 9. Should these dyspeptic complaints be complicated with gout, thirty or forty drops of æther, with a teaspoonful of the compound tincture of cardamoms may be taken twice a day, diluted in one ounce of cinnamon water.

When indigestion is owing to defective biliary secretion, or is combined with a disordered state of the spleen, liver, or biliary ducts, which may be known by the stools being without a due mixture of bile in them, and having a clay-coloured appearance, the best medicine to administer will be the mercurial pill, vulgarly called the blue bill. One of these, consisting of about four or five grains, may be taken every second or third night, carrying it off, and evacuating the contents of the intestines by an aperient draught the succeeding morning. See the Class of Laxatives, P. 11 or 12.

With the view of strengthening the stomach and bowels, and consequently removing the dyspeptic symptoms, the patient should be put under a course of the Peruvian bark and bitters, conjoined with diluted sulphuric acid, and likewise Chalybeate medicines and waters. Of the latter, those of Bath, Buxton, and Tunbridge, will be the most appropriate. Under the Class of Tonics, the reader will find various prescriptions in which the different preparations of the Peruvian bark, cascarilla, calumba, and other vegetable tonics are given, as well as those of the mineral kind. He can make trial of any of them, and if not found to produce the desired effect after a due time, he can substitute others. If he should prefer taking mineral tonics at the same time with those of the vegetable Class, they may be combined as in P. 16, 19, 20, or 25.

Mineral waters are of themselves excellent remedies in most cases of indigestion ; but their efficacy is no doubt considerably increased by drinking them at the fountain head, where by company and a variety of amusements, patients labouring under diminished and impaired health, are likely to receive entertainment as well as to acquire cheerfulness of mind. The general curative effect of the spring itself is much aided by cheerful society, agreeable prospects, pure air, and exercise, particularly on horseback.

In those dyspeptic or flutulent affections with which women are apt to be attacked on or about a cessation of menstruation, a small bleeding will sometimes afford relief; but a careful attention to keeping the bowels open with a little magnesia combined with rhubarb, is particularly necessary, avoiding at the same time all food of a flatulent nature, and taking a little wine or brandy properly diluted with water in preference to malt liquors. Great and certain advantages will be derived, if proper exercise is used at the same time by walking, riding, gardening, &c. in a due degree, and without exciting fatigue.

The diet most appropriate for persons affected with indigestion, is that of a generous and nutritive nature, consisting chiefly of animal food which is easily convertible into chyle, and not prone to acescency; and it ought to be used frequently, but in a small quantity each time. Due care is to be taken to chew the food well, and not suffer it to pass into the stomach until it has been well broken down by mastication. Bread made with yeast is very apt to become sour in weak stomachs, and therefore a preference should be given to biscuit, such as is used on board of ships, if it can be procured. Dyspeptic persons had better abstain from drinking any thing during their meals, lest the solvent property of the spittle and gastric juice should thereby be diminished. A little after the meal is concluded, about half a pint of the usual beverage may be taken. A moderate use of wine may be allowed, and a preference should be given to Sherry and Madeira, as these are less apt to become acid in a weak stomach than Port wine. If these disagree with the patient, he can substitute weak brandy and water for a time; but such an indulgence should not be allowed to become habitual, as by a constant and too free a use of strong liquors, but particularly spirituous ones, the energies of the mind suffer; a train of nervous diseases shew themselves, and the person is at last destroyed by obstructions in the liver or spleen, terminating in dropsy. Such indeed is the fate of most of those who addict themselves to an intemperate use of intoxicating liquors, when they are not cut off suddenly by an attack of apoplexy.

OF THE HYPOCHRONDIAC AFFECTION AND LOW SPIRITS.

This is a very obstinate disease, and becomes daily more common owing to the pressure of the times, the increase of luxury and sedentary employments. It bears some resemblance to dyspepsia; but there is this difference between them, that the hypochondriac affection is one of the mind, and not of the body, and makes its attack more usually in advanced life; whereas dyspepsia is closely connected with debility, particularly of the stomach, and shews itself in common from the age of puberty to that of thirty-five. Another distinguished character is, that the

former is attended by listlessness, languor, a want of activity and resolution, and constant apprehension of dissolution being near at hand, and is usually without dyspeptic symptoms, or when present, they are in general slight.

Symptoms.—The hip, as it is often termed, is a chronic disease, in which there prevails indolence, inactivity, a want of resolution with respect to all undertakings, lowness and dejection of spirits, a dread of danger from any unusual feeling of the most trifling nature, an apprehension of evil on the slightest grounds, a disposition to seriousness, sadness, and timidity, costiveness, acid eructations with occasional flatulency in the stomach and bowels, spasmodic pains in the head and other parts of the body, giddiness, dimness of sight, palpitations, and a copious discharge of very pale urine. Inconveniencies and sensations which other men would disregard, hypochondriacs attack with various remedies, and often change them, wearing out physicians with their complaints, or becoming victims to empirics. Their appetites are usually good and their persons tolerably vigorous, having the perfect exercise of all their functions, except the judgment relative to the disease.

Most persons who are labouring under this or any of the complaints denominated nervous, do not seem refreshed by the sleep they get; they awake out of it with some confusion, and do not come to themselves immediately, and when they do, they fix their thoughts on melancholy subjects, and feel the horrors of their disorder. This state continues with very little deviation till dinner, when they feel sowewhat revived; at night they have a greater flow of spirits, and being desirous to enjoy them, they go late and with reluctance to bed, dreading their certain ebb when they lie down.

Causes.—The hypochondriac disease is occasioned by various causes, such as a sedentary life with a close application to study, anxiety and protracted grief, previous diseases, aliments improper in their quality as well as quantity, worms in the stomach and bowels, obstructions in the spleen and liver, profuse evacuations, violent passions or other emotions of the mind, immoderate venery, intemperance of any kind, and the feeling too acutely any loss or disappointment which has occurred. It therefore commonly attacks persons who lead a sedentary and studious life, and sit up late at night, or whose minds have been oppressed by untoward occurrences. There is an habitual disposition to this disorder in some persons, particularly in such as have a sallow or brownish complexion, and a downcast look. When it has once taken place, it usually goes on increasing as life advances, being in general most troublesome in the autumnal and winter seasons, which in some measure accounts for more acts of suicide being committed during these periods of the year than at any other.

It seems probable that the hip and other nervous affections are through the medium of sympathy somewhat communicable; for

persons, naturally of a cheerful temper, by being long domesticated and associated with those of a melancholic desponding cast, have been known to become greatly dejected.

The hypochondriac affection is to be looked upon more as a troublesome and distressing than dangerous disease, if recent; but when of long continuance, it is apt to terminate in incurable melancholy or madness, or in scirrhous affections of the liver or spleen, succeeded by dropsy.

Treatment and Regimen.—The objects to be kept in view, in the removal of this affection, are to correct what is defective in the stomach; to strengthen the alimentary canal, as well as to give energy to the whole body; and to alleviate the symptoms which keep up and aggravate the disorder.

If there is any crude matter in the stomach, this had best be removed by a gentle emetic of a few grains of ipecacuanha; after which an aperient medicine, consisting of aloes and rhubarb, (see the Class of Laxatives, P. 7) may be taken, and during the whole cure the same may be repeated as the occasion requires.

The best remedies during the intervals will be the bark, stomachic bitters, and chalybeates; and these may be administered in the different forms and combinations specified under the head of the Class of Tonics, not continuing one medicine for any length of time, but changing it every now and then.

Besides these, mineral waters, particularly those of Bath and Tunbridge, may be drank with some advantage to the patient; for, in addition to their tonic powers from the iron with which they are impregnated, the amusements and avocations attendant on drinking these waters at the spring, will tend to soothe the mind and divert it from melancholic subjects.

Acidity now and then prevails in the stomach of hypochondriacal persons; to obviate which, it will be necessary for the patient to take something of the absorbent nature. See the Class of Absorbents, P. 1, 3, or 4. Should there be flatulency as well as acidity, he may substitute P. 4 or 6, given under the head of the Class of Carminatives.

Besides these complaints, hypochondriacal persons are apt to be affected with spasmodic pains in the head and stomach; to relieve which, it may be advisable to employ such medicines as assafœtida, camphor, valerian, volatile salts, æther, musk, and occasionally opium when the pain is very severe. Various combinations of these medicines are prescribed under the head of the Class of Antispasmodics, and a trial may be made of any one of them, taking care to change it for another when no relief seems to have been obtained, or the patient no longer places any confidence in it.

Hypochondriacal persons are very apt to accustom themselves to a free use of opium or some of its preparations, and after a time they find that they cannot do without it. When the practice has been long continued, such persons become feeble and weak, their

complexion acquires a yellow hue, and they look much older than they really are. The immediate effects which opium is observed to have on those who take it habitually, are an exhilaration of spirits; and from a stupid depressed state into which they sink after passing the usual time of taking the dose, they become alert and cheerful. The habitual use of opium is sure however at last to bring on loss of appetite, general debility, and premature decay, with obstinate constipation of the bowels, and ought therefore never to be given way to. The elevation of spirits produced by opium is necessarily followed by a proportionate depression; and the natural consequence of addicting oneself to a regular use of this drug, is torpor and stagnation of both animal and mental powers, although its primary effects are excitement and stimulation of the system. I wish here to recommend to those persons who are guilty of this practice their perusal of a small work which bears the title of Confessions of an Opium Eater, as they will therein see depicted the dreadful sufferings they are likely to bring upon themselves by so doing.

It is not unfrequent with nervous persons to complain of defective vision, under the form of atoms floating before their eyes in the air, and which, although of little or no importance, are apt to excite apprehensions in their mind. The plan of treatment best adapted to this affection is to open the bowels freely, (see the Class of Purgatives, P. 1, 2, or 3,) and then to administer æther and volatile medicines, as specified in the P. 1 or 2, Class of Antispasmodics.

For the removal of the hypochondriacal affection and the numerous trivial complaints attendant thereon, it must be a main consideration with those who are inmated with the patient, to keep his mind amused as much as possible, and to impress on it the prospect of a decided cure. The groundless apprehensions and fears of untoward circumstances, however ridiculous or ill-founded they may seem to others, should never be treated with levity or derision.

The train of distressing thoughts should be interrupted by amusements of various kinds, selecting such as are most congenial with his disposition and circumstances. Attention to business, if accompanied by some bodily exertion, hunting, shooting, fishing, and gardening; progressive journies on horseback, where the mind will be constantly engaged in the diversity of scene, and a visit to some fashionable watering place, may be recommended. Regular and daily exercise on horseback usually proves of high utility to all nervous patients; and instances frequently occur of persons with broken spirits, and constitutions much impaired, in whom a gradual restoration to health and cheerfulness has been effected by this means, when every other method of recovery had been tried without much benefit.

In bad weather, when the patient cannot go abroad, he should have cheerful society at home, and be entertained with a little mu-

sic, a game at cards, billiards, or any other amusement to which he is partial. Interesting or entertaining books may also assist in soothing the spirits, but any close application to study, and keeping late hours, ought to be shunned most carefully.

Frictions of the body with coarse flannel or a flesh brush every morning and evening will be likely to prove beneficial, particularly if deprived of proper exercise out of doors. Cold bathing is occasionally beneficial to hypochondriacal persons; but from the rigidity of the solids which exists, tepid bathing more generally is advantageous. A bath of about 96 or 98 degrees of Fahrenheit's thermometer, made use of every other night, often proves highly serviceable, not only in being agreeable to the patient's sensations, but in obviating wakefulness, and occasioning tranquil sleep, even when opium had previously been administered without the desired end being obtained.

With regard to the diet of hypochondriacal persons, this ought to be light and easy of digestion, but at the same time solid and nourishing. Animal food of the flesh of young animals is the most proper. All vegetables likely to prove flatulent and become acescent, ought to be avoided. Extremes of excess or inanition are to be guarded against, as they hurt digestion: the stomach should therefore never be overloaded with food, nor ever be suffered to remain empty for any length of time. To eat often and little at a time will be a prudent plan to pursue. Malt liquors do not generally agree with hypochondriacal persons, and therefore Sherry, Madeira, or good old Port wine, properly diluted with water, will be preferable for ordinary drink. If these disagree or are disapproved of, spirits of any kind, but more particularly brandy in a state of proper dilution with water, may be substituted.

Tea and coffee, as articles of diet, had best be desisted from, substituting cocao, chocolate, and infusions of aromatic herbs and roots, such as sage, balm, and ginger.

Nervous persons should not indulge in indolence and inactivity, for they require regular and proper exercise throughout the day; they should retire to rest at an early hour, and rise betimes in the morning, for nothing tends more to debilitate the constitution and aggravate every species of nervous complaint than going to bed at late hours and an improper indulgence in the morning, particularly when constantly practised.

OF MELANCHOLY AND FURIOUS MADNESS.

These are diseases nearly connected together, though in some of the symptoms they appear diametrically opposite; for the first is attended with pensiveness and fear, and the latter with fury and boldness. They both agree, however, in being accompanied with great incorrectness of ideas, incongruity of action, and incoherence of expression during the paroxysms unattended by fever.

Some physicians have considered insanity as a disease wholly of the mind and not of the body: whereas others are of opinion that madness arises from a physical lesion and disorganization or morbid action of some part of the body, derangement of the intellectual faculties being wholly the effect; which supposition is strongly supported by the appearances which frequently, although not invariably, present themselves on opening the heads of those who have died whilst labouring under this malady.

A high degree of eccentricity or singularity of conduct, great dejection of spirits without just grounds, and an invincible tendency to immoral habits, notwithstanding the inculcation of the most correct precepts and the force of virtuous example, are in my opinion to be looked upon as only slighter shades of insanity. The disease has been distinguished by some as consisting of many varieties, but it appears to me that the best division is into periodical and habitual, acute and chronic.

Although insanity generally breaks out suddenly, the manners of the patient becoming unusually impetuous, his conversation hurried, and his mind full of projects which he pursues with restless activity, still there are instances where insanity makes its approach gradually; a certain waywardness or irregularity of action is observed for some time, perhaps for a year or more, before the individual is set down by his friends as a maniac.

Symptoms.—The signs which precede melancholy are sadness and dejection, timidity, fondness for solitude, fickleness, fretfulness, restless nights, paleness of visage, a scanty secretion of urine, costiveness, and inactivity. Persons in this disease become thin, respiration and the pulse are weak and slow, a sullen gloom takes possession of the countenance, anxiety and grief hang heavily upon them, and their imagination is incessantly haunted with fearful apprehensions. Some think that they have committed a crime deserving of a capital punishment, or that they are unworthy of mercy at the throne of heaven: others that they are every where imprisoned, or that their body is composed of glass or some brittle substance, and are therefore afraid to move lest it should break to pieces. In many, these distempered ideas seem evidently combined with some bodily affection, such as painful respiration and uneasiness about the heart, deep sighs, and palpitations.

The symptoms which attend on furious madness are wildness of the countenance, glistening of the eyes, redness of the face, pains in the head, noise in the ears, loud roarings, violent exertions of strength, grinding of the teeth, absurd incoherent discourse, a dislike to such places and scenes as formerly afforded pleasure, unaccountable abhorrence and malice to certain persons, particularly their nearest relatives and friends, a considerable diminution of the irritability of the body with respect to the morbid effects of cold, hunger, and the want of sleep, together with a full and frequent pulse.

The ear appears to be the organ of sense most apt to become

affected in insane people, as few of them are blind but numbers are deaf; and when not actually so, they are troubled with a ringing in the ears and some difficulty of hearing. The majority of persons of this description usually suffer an aggravation of all the symptoms when placed in a recumbent position, and when in a furious state, they seem to avoid an horizontal posture as much as possible.

Hereditary derangement is generally announced in good time by whimsicalities of disposition, certain singularities of character, caprice in taste and habits, a peculiar and evil intentioned conduct, but little aptitude to the study of the sciences, and an immethodical turn for the arts of display and the pleasures of imagination: sometimes indeed delirium appears to be merely an advanced state of already existing intellectual disorder.

Causes.—Insanity may arise from severe commotions of the mind, such as long continued and excessive grief, dread, terror, fear, disappointment, and is now and then induced by excess of love, intense thought, abstruse studies, solitude, the suppression of customary evacuations, excessive venery, an intemperate use of spirituous and vinous liquors, narcotic or stupefactive poisons, acute fevers, or other diseases, and particularly injuries of the head. Not unfrequently it is the effect of religious gloom and enthusiasm, or proceeds from an hereditary predisposition to it. Some physicians have indeed denied that such a constitutional bias can be entailed by either parent on the offspring, but this is a dangerous doctrine to inculcate, as it tends to throw individuals off their guard, and encourage them to intermarry with those descended from insane persons: it is moreover in direct opposition to a fact well and fully established.

Madness may be distinguished from phrenzy, as in the former there are no febrile symptoms or severe pains in the head, and from delirium, by the person not being conscious in the latter of external objects when roused; and even if he appears to be so at the time, he soon relapses into a state of inattention; whereas in insanity he is frequently sensible, and is often forming schemes within himself of preventing or revenging supposed injuries.

In estimating the likelihood of recovery, the violence of the symptoms, such as the expression of the countenance and eyes, the state of the natural functions as regards sleep, appetite, evacuations, &c., are to be well considered. The intervention of lucid intervals is always an important matter; for, in proportion to the frequency, duration, and steadiness of these, are we warranted to think favourably of the issue. Recent cases hold out a better expectation than those of long standing.

If insanity has arisen from any suppressed evacuation, or from a cause depending upon a bodily affection, we may entertain hopes of a cure; and in these cases, a diarrhæa, hemorrhage, or eruptions of any kind appearing spontaneously, will sometimes carry off the disease. When the mind can be diverted from its accustomed

train of reflections, and becomes capable of lively impressions, and the patient gets sound refreshing sleep, there are hopes of a recovery. In those cases also where mental derangement has been of a short duration, or has arisen from the sudden impression of an unexpected calamity, we may in general look for a cure: but where, on the other hand, the mind has become deranged by a life of intemperance or debauchery, or the corroding operation of any passion, there will remain but little hope of an entire or permanent restoration of its proper faculties. If the disease is hereditary, a radical cure is scarcely to be expected; as accidental and external causes act then with more violence upon the mind, and more readily overset reason, and such cases are usually most difficult to remove. Insane persons are found to recover in proportion to their youth, and are more curable in early than in advanced life; and those afflicted with furious insanity recover in a much larger proportion than those who labour under melancholy. Where insanity supervenes on palsy or epilepsy, a cure is very seldom effected. Women affected with insanity in consequence of lying-in, recover in a larger proportion than patients of any other description.

Treatment and Regimen.—The treatment which appears to be most appropriate in all cases of insanity, is to pay particular attention to the state of the mind, and to afford what aid from medicine the disorganized state of the brain or other parts of the body may seem to stand in need of. That maniacs require aid from medicine in the first stage of the disease, cannot I think admit of a doubt, for insanity has usually been found on dissection to be connected with a morbid state of the brain.

With the first of these intentions, the attendants on insane persons should endeavour to gain an ascendancy over them, the means of acquiring which must vary with the disposition and circumstances, and therefore should be attentively studied. If possible, it should be accomplished by mild, soothing, and gentle means. Tyrannical severity may excite fear in lunatics, but most probably it will be mingled with contempt. It appears obvious that a system of restraint without indignity, of rigid order and due discipline, combined with lenity and conciliation, is the only rational and successful method of combatting the wild notions of lunatics. The minds of such persons should be amused with any diversion which turns their thoughts directly contrary to those which possessed it before; and their spirits kept elated by relating to them entertaining stories, and indulging them with music. In melancholy madness these will be likely to produce a very good effect.*

* Those who may have a relative or friend afflicted with mental derangement under any form whatever, I beg leave to direct their attention to any asylum in Fisherton, near Salisbury, under the direction of Mr. Charles Finch. There the patients are treated with every possible attention and kindness; they are allowed every indulgence and recreation consistent with their safety and welfare. The house is pleasantly situated on the Bath road, commands an extensive prospect over a fine country, and has a large pleasure ground attached to it, where

In furious madness, patients should be confined alone in quiet rooms somewhat darkened, that they may not be affected by the stimuli of sound and light; and to prevent them from committing any violence either on themselves or their attendants, their arms may be confined by means of what is called a strait waistcoat, or they may be restrained during the violence of the paroxysm by a strong leathern belt girded round the body, having small straps attached to it to go round each arm: this allows the patient to use the hands, and does not in warm weather increase the heat and restlessness, as the strait waistcoat is apt to do. No confinement, however, beyond what is absolutely necessary should ever be employed, as it might create such an irritation of mind as would greatly interfere with the probability of a cure.

Insane persons should be made to rise early, have their food served up to them at regular stated periods, and take such exercise as is best suited to them. In all large receptacles for such persons, it will be advisable to divide them into classes according to the nature and degree of their malady, and not only to separate the sexes from each other, but to keep the paupers apart from those whose station in life would make them improper inmates with those of vulgar manners. The strictest attention ought at the same time to be paid to cleanliness in every respect, and to the keeping up a sufficient ventilation through the different apartments.

Persons in a state of convalescence should always be kept separate from those who are suffering under a paroxysm of the disease, as by intermixing them, their cure would not only be retarded, but in all likelihood ultimately prevented. The congregating insane persons together in a promiscuous way, as is too frequently the case, and not separating and properly classing such patients both in respect to their sexes, ages, condition in life, and kind or degree of their malady, is certain to be attended with bad consequences.

Some objections have been raised against sending insane persons to a lunatic asylum, both among the highest and lowest classes of society, under the fear of severe treatment, and the hazard of rendering their disorder permanent; but these may be considered as groundless. To attempt the complete seclusion of the maniac under a furious paroxysm at his own house, and in the bosom as it were of his family, is seldom practicable; for a patient confined at home naturally feels a high degree of resentment when those whom he has been accustomed to command, refuse to obey his orders, or assist in restraining him. In such cases it will, therefore, always be advisable to remove the patient from his home, and from those objects he has been accustomed to.

If, however, a patient is quiet and manageable without coercion,

the patients take daily regular exercise without being exposed to the view of persons passing by. The paupers are kept asunder from persons in a superior station of life, and the male and female patients are accommodated considerably apart from each other.

and his disease partakes more of the nature of melancholy than fury, then the attendance of an affectionate wife or husband, brother, sister, or friend, at his own home or any private house, may, with proper instructions, be able to do much more than can be expected where a number are to be attended to.

The medicinal treatment in insanity must be adapted to the nature of the species of malady under which the patient labours, as well as to his habit of body and time of life. If he is of a robust full habit, and is afflicted with furious paroxysms, it will be highly advisable to draw blood from the arm to the extent of twelve or sixteen ounces at the commencement of the disease, resorting afterwards to the application of leeches to the temples, or the scarificator and cupping glasses to the back of the neck, if the further abstraction of blood should appear necessary. Bleeding does not appear an advisable remedy in melancholy, as it might exasperate the complaint, and by being repeated, would be likely to reduce the patient to a greater state of despondency as well as debility.

In most cases of insanity there is a disposition to costiveness; and for the purpose of removing this, as likewise for obviating any fulness in the vessels of the head, it will be proper to give frequent doses of some cooling aperient medicine. See the Class of Laxatives, P. 4, 5, or 6. In obstinate cases of constipation, we may substitute P. 3 or 9. In insanity, and other cases where the administration of medicines in a bulky form is extremely difficult, it would appear that the Croton oil offered decided advantages. Two drops of it with a little aromatic confection, formed into a pill, will be a sufficient dose; or the same quantity may be rubbed on the patient's tongue, which will be sufficient, it is said, to excite due action of the bowels.

Emetics ought not to be given in maniacal cases, except with the view of removing symptoms that may accompany the disease; but such medicines as promote perspiration, and excite a plentiful secretion of urine, may be useful. For this purpose the saline medicine, (see the Class of Diaphoretics, P. 5 or 6), with the addition of a few grains of the nitrate of potash to each dose, may be administered.

After proper evacuations, camphor, musk, æther, valerian, and such other medicines (see the Class of Antispasmodics, P. 3, 4, 6. and 9), will be highly appropriate in most cases of melancholy. Opium appears a doubtful remedy; but if the patient seems much reduced or exhausted from a want of sleep, we may make trial of forty or fifty drops of its tincture, in a little camphorated mixture. Should it be found prejudicial on trial, we may then substitute a pill consisting either of the extract of poppies, or that of henbane, to the extent of five grains for a dose. If these do not answer, we may try from fifty to one hundred drops of the tincture of hop, as it is evidently a narcotic, and induces sleep without constipating the bowels as opium is apt to do.

In the milder species of melancholy, or what is called low spirits,

cheerful company, a generous diet, proper exercise and amusements, are the most likely means to remove the complaint. The melancholic may, therefore, be conducted to the different places of public resort, under the pretext of drinking the waters which they afford. There a variety of interesting objects as well as subjects of attention will be afforded. At the proper season of the year, they should be encouraged to enter on a course of field sports and rural pastimes, and likewise such occasional employment as requires a moderate exercise of the faculties of the mind. In the evenings music of the exhilarating kind will be serviceable.

In furious madness, besides bleeding the patient at the commencement, if young and of a robust habit, and purging him frequently, it may be advisable to have the head shaved, and linen cloths wetted with vinegar and water kept constantly applied over the whole scalp. A blister may, at the same time, be put at the back of the neck, or high up between the shoulders. Where great excitement and increased tone in the arterial and nervous system prevail, the sedative effects of foxglove point it out as a useful remedy after bleeding and frequent purging. Twenty drops of the tincture, or half a grain of the powder, may be given three times a day at first, and the dose be gradually increased to half as much again of either. To produce a decided and permanent effect, it will be necessary to keep the constitution for some length of time under the influence of the medicine.

Other sedatives, such as hemlock and henbane conjoined with camphor, have been resorted to in cases of furious madness, with the view of tranquillizing the patient, and procuring sleep, in consequence of opium having been found generally prejudicial. They may be administered as in P. 1 and 2, under the Class of Sedatives.

The benefit which has been received in some maniacal cases from the application of ice and snow to the naked head, has induced some medical men to advise the use of a cold bath in a sudden manner, such as throwing the person into cold water by surprize, or pumping cold water from a height of several feet on his head; but in all cases of furious madness connected with a fulness in the vessels, a cold bath would, in all probability, be likely to prove injurious. In the best conducted asylums for lunatics in this country, as well as in France, tepid or warm bathing is much resorted to as a remedy; and at the Retreat Asylum at York, the latter has been considered of greater importance and efficacy in most cases of melancholy madness in particular, than any other medical means whatever.

With regard to the diet of insane persons, this should be conformable to the general curative plan. If this is of a lowering nature, as in the case of furious madness it ought to be, the diet must be similar, and should consist wholly of vegetables of a cooling and opening quality, whilst the drink should be water, whey, or very small beer: on the contrary, if the curative plan be tonic, as in melancholy it ought to be, the diet must correspond. Animal

food in moderation may be allowed, together with other articles that are light and nutritive. During a state of convalescence, a moderate use of wine may be permitted in this last species of the disease, taking care that it neither affects the temper of the patient nor exasperates his aversions. Insane persons who are paralytic, require a more nutritious diet and cheering beverage than such patients of any other description, and they require greater warmth also in the winter months.

Towards the close or termination of typhus fever, where great debility and weakness exist, some derangement of the mental faculties is apt now and then to take place. In such cases a generous and nutritive diet must be allowed, and the Peruvian bark with bitters and chalybeates (See the Class of Tonics for various forms of these) be given as medicines. All evacuations should be avoided: such exercise as the strength will admit of, either in a carriage or on horseback, should be taken daily.

Intellectual derangement is also apt to ensue, both after abortion and delivery; and the disease, although frequently tedious in such cases, is oftener cured than when arising from any other cause. From nice observation it appears, 1. That mental derangement is more frequent among women recently confined than among those who give suck. 2. That the danger diminishes in proportion to the length of time that has elapsed since the accouchement. 3. That women are much more subject to the complaint immediately after weaning than during the period of suckling. Puerperal insanity seldom takes place without a suppression of the lochial discharge; and the same may be said of the lacteal secretion. During the continuance of the complaint, the woman ought to be kept as quiet as possible. If the insanity is of the furious kind, in addition to proper restraint, by means of a strait waistcoat or leathern girdle as before pointed out, it will be advisable to empty the bowels freely, abstract blood from the temples by means of leeches, apply blisters to the nape of the neck, insides of the legs thighs, determine gently to the surface of the body by the saline mixture mixed with small doses of tartarized antimony, (See the Class of Diaphoretics, P. 6,) asisted by a warm bath, but more especially the hip bath; and if requisite, allay irritation by liberal doses of the camphor julap combined with æther. Should these fail in producing the desired effect, a trial may be made of the extract of henbane (See the Class of Sedatives, P. 1); as opium is not in such cases an appropriate remedy.

Melancholy comes on later among lying-in-women than furious insanity. It is obstinate in some cases, but usually goes off soon after the child is weaned, and the strength has been restored. It will, therefore, be proper to remove the child from sucking the mother without loss of time, and strengthen her body by light food of a nutritive nature. During a state of convalescence her attention and mind should be occupied by cheerful conversation, music, light reading, and afterwards by a frequent change of scene and regular exercise daily in a carriage.

OF THE APOPLEXY.

An apoplexy is a sudden privation in some degree of all the senses and motions of the body, except those of the heart and lungs, attended by stupefaction and sometimes snoring. The disease is usually divided into two species, the sanguineous and serous: the first is caused by the blood distending the vessels and thereby compressing the brain, or by an extravasation of blood in consequence of the rupture of a vessel; the second arises from a collection or effusion of a serous fluid in the cavities of the brain.

Symptoms.—An attack of apoplexy is often preceded by a swimming, giddiness, or pains in the head, frequent drowsiness, numbness of the extremities, loss of memory, faltering of speech, and the night mare. The sanguineous is supposed to attack more suddenly than the serous, and without unusual sleepiness or much oppression. The patient falls down, and lies as in a profound sleep, his face appears red, flushed, and bloated, the veins of the neck and head are turgid, the eyes protuberant and flushed with tears, respiration is tolerably free, although accompanied with a rattling in the throat and snoring, the heart beats strongly, the pulse is slow and full. Occasionally there is a vomiting, and now and then the contents of the intestines and bladder are passed involuntarily.

The serous apoplexy is apt to be preceded by unusual heaviness, giddiness, and drowsiness; the countenance is pale, and the pulse languid and weak. After the seizure, the face is not remarkably red or flushed, the veins are not turgid, the pulse is not strong or remarkably full, but rather weak and inclinable to intermit; there is a diminution of the natural heat, and a working of froth from the mouth.

Causes.—Certain circumstances greatly predispose to an attack of apoplexy, such as great obesity, especially in persons having a large head and short neck; indulgence in the luxuries of the table, a suppression of accustomed evacuations, intense study, a sedentary life, and an overfulness of blood however produced; but the following are to be considered as the exciting causes, viz. violent passions of the mind, severe exercise, particularly during very hot weather, long stooping, overloading the stomach with food, excess in venery, viewing objects for a long time obliquely, wearing any thing tight about the neck, frequent intoxication, external violence, as fracture of the skull or depression of some portion of the bones thereof on the brain, suffering the body to be too suddenly cooled after being violently heated, the application of the fumes of certain narcotic and metallic substances, such as opium, pungent spirits, mephitic or noxious airs, &c. The immediate cause, however, in most cases, of sanguineous apoplexy, is blood extravasated on the brain, or its vessels being in a state of over-distention; and in the serous, pressure on the brain from an effused serous fluid.

The patient is often carried off at the first attack of apoplexy,

and few survive any repetition of it. He frequently dies on the first, second, or third day. The power of swallowing being suspended, and bloody or dark coloured urine indicate great danger. When there is much frothing at the mouth, and cold sweats with considerable interruption of the breathing, death seems inevitable. In a few cases it goes off entirely by a purging, or hemorrhage; but more frequently it terminates in a paralytic affection of one whole side of the body, and then induces sometimes a state of mental imbecility for the remainder of life. The sanguineous apoplexy is more dangerous than the serous. When a person's recovery is almost immediate, it is evident that there has been neither extravasation nor effusion, but that the attack arose from an overdistention of the vessels of the brain at the time, owing to a preternatural determination of blood to the head.

Treatment and Regimen.—In the sanguineous apoplexy, prompt and decisive measures must be adopted to lessen the force of the circulation towards, as well as in, the brain. The patient is to be raised up as high as possible, his head be immediately uncovered, his clothes loosened, especially about the neck, fresh air be freely admitted to him, and his body kept in a quiescent state.

These steps being taken, he is to be bled freely in the arm or jugular vein, and from a large orifice; which operation must be repeated again in an hour or two, according to the state of the pulse, if deemed necessary. If an expert surgeon is at hand, it might be more advisable to open the temporal artery, and draw off sixteen or twenty ounces of blood from thence, instead of taking it either from the arm or jugular vein in the neck. A laxative clyster should then be thrown up the intestines with all speed (see the Class of Purgatives, P. 6,) and this should be repeated every two or three hours, until copious stools are procured. If the bowels continue obstinately constipated notwithstanding the exhibition of active clysters, and the patient be incapable of swallowing medicine, the intestines probably will be excited to action by merely putting two drops of Croton oil on his tongue, and this perhaps rapidly, or within the space of an hour.

Blisters must next be applied between the shoulders and to the calves of the legs, and cataplasms of mustard (see the Class of Stimulants, P. 13) to the soles of the feet.

Should the patient still remain in the apoplectic state, it then will be proper to apply several leeches to the temples, and when they drop off, encourage the wounds to bleed freely, by bathing them from time to time with a sponge dipped in warm water; or the patient may be cupped to a considerable extent in the nape of the neck, or above where the blister has been put between the shoulders.

As soon as the patient becomes capable of swallowing, an active cathartic (see the Class of Purgatives, P. 1, 3, or 4,) should be given to him in divided portions, and at proper intervals, so as not to excite vomiting if it can be avoided. Emetics have indeed been

employed by some physicians to promote this, but it is only where apoplexy has been produced by intoxication, overloading the stomach with much food, or by opium or any other narcotic poison having been swallowed, that the exhibition of an emetic can be either proper or advisable. Where vomiting takes place spontaneously, the stomach may, however, be relieved by a basin of chamomile tea.

To assist in determining the blood from the head, it may be right to have the hair shaven off, and to apply linen cloths wetted with cold water and vinegar over the whole scalp, as soon after the attack as possible.

When the fit goes off, some of the nervous medicines recommended in palsy may be taken, particularly if any paralytic affection is left behind, and which is generally the case. Costiveness must at the same time be carefully removed by taking from half an ounce to six drachms of the tincture of rhubarb, as the occasion may require.

In the serous apoplexy, the pulse not being so strong, the countenance so florid, nor the breathing so oppressed as in the sanguineous, bleeding to any extent will not be required, and it need seldom be repeated. Blistering plasters and sinapisms should be applied, laxative clysters be injected, and the bowels kept open by repeated doses of some gently purgative medicine. See the Class of Laxatives, P. 7 or 12.

Volatile spirits and salts have been employed as stimulants to the nose and temples in both species of apoplexy, but their use does not seem advisable, as they are likely to increase the determination of blood to the head.

When the bowels have been sufficiently opened, the patient may take every four hours two table-spoonsful of a medicine composed of five ounces of camphor mixture, two drachms of volatile tincture of valerian, and three drachms of the tincture of castor. Horse-radish, as also mustard, may be taken freely with his food, or in any other manner that will be agreeable.

Persons of a peculiar make, as well as those who have been once attacked by apoplexy, are greatly disposed to a return of the disease, and which is always more dangerous than the preceding; to prevent which, due care should be taken to avoid cautiously all those causes likely to induce it, particularly hot and crowded rooms, excessive heat of the sun, violent exercise, late hours of retiring to bed, too long indulgence in sleep, strong or continued exertions of the mind, sudden and violent gusts of passion, and eating hearty meals of any kind, but more particularly supper. Their diet ought to be spare and light, avoiding spirituous liquors, wine, ale, &c. and high seasoned food. The feet ought to be kept warm, and never be suffered to remain long wet; but the head may be shaved, and washed morning and night with cold water. Moderate but regular exercise should be taken daily, the bowels be kept regular and open, and those who are of a full habit should occasionally lose a

little blood. They should never wear any thing tight about the neck, or go to rest soon after eating, and when in bed, the head and shoulders ought to be raised considerably higher than the rest of the body.

In those who are predisposed to an attack of apoplexy, nothing will produce a better effect, if assisted by aperient medicines occasionally, than a seton in the neck, or a perpetual issue between the shoulders; but these should never be withdrawn without substituting some other drain.

Such persons in particular should never wear any thing tight about the neck, as in all likelihood one reason why so many men are annually destroyed by apoplexy, is the mode pretty generally pursued at the present time of tying the neckcloth or cravat so very tight, which retards the return of the blood from the head to the heart; in consequence thereof the vessels of the former become gorged with blood, and distended beyond their capacity of bearing; they are therefore ruptured, and the person is destroyed by an effusion on the surface of the brain or in its cavities.

The coup de soleil, or stroke of the sun, which now and then occurs in intense hot weather during the summer to those who are exposed to its meridian power, and very frequently happens in warm climates, seems to be exactly similar to a fit of apoplexy, and requires the same treatment.

OF THE PALSY.

This disease may be considered as a loss or diminution of motion or feeling, or of both, in one or more parts of the body. When one entire side of the body, from the head downwards, is affected, it is distinguished among professional men by the name of hemiplegia. If one half of the body, taken transversely, be the seat of the disease, it is named paraplegia; and when confined to a particular limb, or set of muscles, it is called a paralysis.

Symptoms.—In some cases, an attack of palsy is preceded by a numbness, coldness, paleness, and slight convulsive twitches; but more usually there takes place a sudden and immediate loss of all motion and sensibility of the parts. The eye and mouth are frequently drawn awry, and the speech, if not wholly taken away, is indistinct and incoherent.

Causes.—The immediate cause of palsy is a compression on the brain. The predisposing and occasional, are injuries of the nervous system, by intemperance, certain poisons received into the body, as mercury and lead, the nervous cholic, injuries done to the spinal marrow, a sudden fright, advanced age, &c. The disease may also arise from the suppression of any accustomed discharge of blood, the drying up issues or old ulcers, or whatever tends to relax and debilitate the constitution. Sometimes it proceeds from a translation of rheumatism or gout to the head, but most frequently from a previous attack of apoplexy.

It is only the slighter degrees of palsy in which we can expect to afford much relief. In general there is but little hope of a cure: the parts being deprived of both motion and sense, gradually wasting and becoming withered, and convulsions, are to be considered as very unfavourable symptoms. When the disease has ensued as the consequence of apoplexy, it ultimately terminates in the destruction of life, although the patient sometimes lives for several years. The mind is apt to be reduced to a state of great imbecility, in consequence of palsy, and not unfrequently insanity has ensued. A paralytic affection of the upper extremity has been considered more dangerous than of the lower.

Youth and previous strength of constitution, a sense of pain and itching in the paralyzed parts with returning sensation of motion, may be regarded as favourable circumstances.

Treatment and Regimen.—If the patient is of a full or plethoric habit, and the accession of the fit be sudden, we should resort to bleeding from the jugular vein, or arm, as speedily as possible; after which the bowels must be opened by an active clyster repeated every four or six hours until the power of swallowing returns, and then by purgative medicines as advised in apoplexy. Afterwards a blister must be applied as near the part affected as possible, and the limbs well rubbed with flannel or a flesh brush. Where palsy makes its attack in a debilitated constitution, or in a patient advanced in age, and where the head is not much affected, bleeding and active purgatives would be injurious. During the fit, bottles, stone jars, or bladders filled with hot water should be applied to the feet, the body and limbs be rubbed with a volatile liniment composed of equal parts of camphorated spirits and hartshorn, and a blister be applied to the part affected. As soon as the patient can swallow, some warm cordial medicine should be given to him. See the Class of Antispasmodics, P. 1, 3, or 5.

As an external stimulant, electricity, both by shocks and sparks, is often attended with a good effect; but care must be taken in using this remedy to apply it only with a moderate force, and to confine its application to parts which are somewhat remote from the head. Galvanism has occasionally been substituted for electricity, and with benefit.

Warm bathing is another remedy which has been much used with advantage as an external stimulant in paralytic affections which have ensued where there is diminished vital heat, or an enfeebled constitution, or have arisen in consequence of the application of narcotics. Hence the waters of Bath are much resorted to by paralytic patients, whether made so by former intemperance, or any other cause of premature decay. An artificial warm bath may be substituted where the natural ones cannot be resorted to.

Mustard, horse-radish, volatile alkaline salts or spirits, gum guaiacum, and æther, are the stimulants (See this Class, P. 2, 3, and 4,) which promise the greatest relief as internal remedies; and these may be taken as in the prescriptions referred to, as

well as the leopard's bane in P. 6, from which singular benefit has been derived in paralytic affections, as well as others which have originated from impaired nervous energy.

Tonics (see this Class, P. 7, 8, 14, and 20), joined with aromatics, are also useful medicines in palsy which has arisen from any debilitating cause. The nitrate of silver, from its tonic and good effect in epileptic affections, has been prescribed in some cases of palsy, and with benefit. We may give the eighth of a grain in a pill at first, increasing the dose gradually every other day until we get to one or two grains.

If the tongue be affected, the patient may gargle his mouth frequently with a strong infusion of horse-radish and bruised mustard seed. He may likewise chew ginger, or other warm spices.

If the complaint has arisen from the fumes, or introduction of poisonous metals into the system, of which lead is the most frequent, in addition to active and stimulating purgatives and clysters, mercury must be employed, this having been found an excellent antidote.

The lower extremities occasionally become paralyzed as a consequence of some deformity of the spine or back, or a thickening of the cartilages which connect the bones thereof together. In such cases, an issue formed with caustic must be made as near to the part affected as possible, on each side of the ridge of the back bone, and the patient be kept constantly in a recumbent position for a due length of time.

In the palsy which arises in persons of a full habit, the diet should be light and spare ; but when the disease proceeds from relaxation or debility, which is generally the case, or makes its attack at an advanced period of life, it ought to be invigorating and warm, being seasoned with spicy and aromatic vegetables, as mustard, horse-radish, &c. The drink may be some generous wine, brandy and water, or mustard whey.

Exercise is of great importance in palsy : if the patient is capable of walking he should take this exercise daily ; but if deprived of the use of his legs, he ought then to be carried abroad in a carriage of some kind, and none can be more appropriate than the Bath chairs upon wheels, on account of the facility of placing the patient in them, and their being drawn about by an attendant. Flannel should always be worn next the skin, and cold, moist, or damp air be avoided. In the winter, paralytic persons should remove to a warmer climate, if circumstances will admit of it.

SPASMODIC DISEASES.

OF THE HYSTERIC DISEASE.

This complaint ranks among those commonly termed nervous ; it appears under various forms, and is attended with a variety of symptoms which denote the animal and vital functions to be great-

ly disordered. It is chiefly confined to females, as in them the nervous system is more excitable than in males, and a great sympathy exists in them between the brain and womb, so that from any slight irritation in the latter organ, the whole nervous system is often so violently disordered as to occasion the peculiar convulsion and state of mind denominated hysteria or hysteric fits.

Symptoms.—An attack of the hysteric affection is generally preceded by yawning, stretching, lowness of spirits, anxiety of mind, alternate paleness and flushings, an effusion of tears, palpitations at the heart, oppression at the chest, a copious discharge of limpid urine, and pain in the left side of the belly, with a sense of distention, giving the idea of a ball rolling itself about, and gradually advancing upwards until it gets into the stomach, thence removing to the throat, it occasions, by its pressure, the sensation of a foreign body lodged there.

The disease having attained its height, the patient seems threatened with suffocation, she becomes faint and falls down in a state of seeming insensibility, her limbs are variously agitated, and the body is turned from one side to the other; wild and irregular actions take place in alternate fits of crying, screaming, and laughter, incoherent expressions are uttered, and a frothy discharge of spittle issues from the mouth. At length the spasms abate, a quantity of wind is evacuated, perhaps upwards, with frequent sobbing and sighing; and the patient recovers the exercise of sense and motion, but has no recollection of what has taken place; she however feels a pain in her head and a soreness over her whole body.

In some cases the hysteric fit is slighter, and closely resembles a swooning or fainting away, during which the person lies as in a sleep, only the breathing is so low as to be scarcely perceptible.

Causes.—Peculiar irritability of the nervous system, grief, anxiety of mind, leading a sedentary and studious life, excessive evacuations, the suppression of menstruation or neglect of usual discharges, great proclivity to venery, flatulent and acescent food, and previous diseases which have much impaired the tone of the system or of the alimentary tube, are the most general causes of hysteric affections; but beyond doubt a fit of it sometimes is produced by sympathy, as we frequently find that one of the company being suddenly seized, other females of the party quickly become affected also.

The hysteric disease is more generally met with in unmarried women, and between the age of puberty and the thirty-fifth year, than in those who have entered the connubial state, or who have attained a more advanced period of life. Girls on the approach of menstruation, and women on becoming pregnant, as also those who labour under a suppression of the menses, are frequently its subjects. Occasionally we meet with it in the more delicate of the male sex.

An hysteric fit may be distinguished from an epileptic one by the profuse discharge of limpid urine, and other preceding symp-

toms, as well as by the ball as it were lodged in the throat, and by the laughing, crying, and other symptoms before enumerated.

The hysteric affection differs likewise from a swooning or fainting fit by there being in the latter an entire cessation of the pulse, and a ghastly countenance ; whereas in the former, there is often something of a colour, and the face is more expanded ; there is likewise a throbbing of the pulse to be perceived, although it is languid, and the fit may continue for two or three days, which is never the case in one of swooning.

The hysteric disease is seldom attended with danger, unless it arises in a person of an impaired constitution, or in cases where the fits are extremely violent and of long duration, when it sometimes degenerates into epilepsy, especially if there exists a predisposition thereto.

Treatment and Regimen.—The objects to be attended to in treating this disease properly, are in the first place to allay the spasms during the fit, and in the second, to prevent any return of the paroxysm by strengthening the nervous system during the intermissions.

In persons who are young and of a plethoric habit, and where the pulse is full, or in pregnant women, it may be necessary to bleed the patient ; but where the disease has arisen in a weak delicate constitution, or has been frequent in its attacks, this operation would be very improper. During the fit, it will be advisable to rouse the person by applying volatile spirits or salts to the nostrils, and to rub the chest and feet for some time with a flannel cloth or warm hand, or put the feet and legs into warm water. The temples may also be rubbed with a little æther. Sprinkling the face with cold water will sometimes of itself be sufficient to rouse the patient.

If the fit is of any continuance and the bowels are confined, it will be proper to administer an aperient clyster, composed of ten or twelve ounces of an infusion of senna, in which one ounce of the sulphate of soda has been dissolved ; and as turpentine has been found a powerful medicine in hysteric affections when given in the same way, half an ounce of the oil may be added to the above ingredients.

As soon as the woman is perceived to be capable of swallowing, either of the draughts in the Class of Antispasmodics, P. 1, 3, or 5, may be immediately given, and if necessary, be repeated in four hours. If the spasms have been very violent, fifteen or twenty drops of the tincture of opium may be added to the first draught, but if not, it will be best to omit it.

Hysteric fits not unfrequently arise from a disordered state of the digestive organs, and in all cases the nervous system is rendered irritable by it, hence favouring the hysteric affection. In the absence of the fits, it will therefore be advisable to strengthen the stomach, as well as the nervous system, by a use of tonics, such as preparations of iron, Peruvian bark, bitter infusions, and chaly-

beates, (see the Class of Tonics, P. 5, 7, 8, 9, 11, 19, and 20,) varying them occasionally. If the patient is incommoded by acidity or flatulency in the stomach, half a drachm of the carbonate of soda, or fifteen drops of the solution of potash, may occasionally be taken with the above medicines, or in any other convenient vehicle.

When hysteric affections originate from a suppression or obtruction of the menses, these must be promoted by adopting the means advised under those heads.

Where the stomach becomes disordered with a crampy sensation, we should have immediate recourse to considerable doses of æther combined with opium, &c. See Cramp in the Stomach.

Hysterical women are very apt to be distressed when in bed or asleep by seizures of the cramp also in the extremities, and in mild cases immersing the feet and legs in warm water, and then rubbing them well with the hand, will be sufficient to remove them; but when the spasm is violent, it may be necessary, in addition to bathing them in warm water, or fomenting them, to use frictions with an anodyne liniment externally, and to give opium combined with æther and camphor internally. See the Class of Anodynes, P. 5 and 6.

Should the stomach be affected at any time with sickness or a loathing of food, a mild emetic may be given to evacuate any crudities, and the body be kept open with the following pills. Take fifteen grains of aloetic pills with myrrh, and divide the mass into three pills, which are to be given for a dose.

To lessen the irritability of the system, antispasmodic medicines will be advisable as well as tonics, the best of which are æther, camphor, assafœtida, and castor, as in P. 3, 6, 7, or 9, Class of Antispasmodics. In many cases a combination of these two classes of medicines may be preferable to giving them separately. The effects of these remedies are to be assisted by regular and proper exercise; by keeping the mind at all times as tranquil and cheerful as possible by occupying it in some pleasing and interesting pursuit; by frequenting Bath, Tunbridge, and other chalybeate springs, where a variety of amusements are afforded, and by an appropriate diet, consisting chiefly of animal food with a moderate quantity of wine. From the tendency in hysteric constitutions to flatulency and acidity in the stomach and bowels, most vegetables are apt to disagree. In the summer and autumnal months, cold sea bathing will be likely to prove serviceable, as it gives energy to the whole system.

OF THE EPILEPSY.

The epilepsy, or falling sickness as it has been vulgarly named, is a violent and convulsive motion of the body, in which all or many parts of it are variously agitated and severely contracted. In true epilepsy there is a total loss of sense; and although persons who are affected with this disease fall down suddenly, similar to

those struck with apoplexy, they do not lie quiet like them, as if in a profound sleep; hence the distinction between the two disorders.

Symptoms.—An attack of epilepsy is sometimes preceded by stupor, drowsiness and pain in the head, ringing in the ears, a pale countenance, a languid pulse, and a kind of tremulous sensation, beginning in the lower extremities, often in the great toe and ascending to the head; but sometimes it comes on suddenly and without any previous warning, the patient falls on the ground deprived of all sense, and is universally convulsed. The tongue is thrust out of the mouth, and is frequently much wounded by the violent and sudden contraction of the muscles of the lower jaw; there is a discharge of frothy spittle with a kind of hissing noise, the thumbs are shut close in the palms of the hands, and are with difficulty taken out, and all sensation is suspended, insomuch that even by stimulating the body in various ways, the patient cannot be brought to himself.

After a time the convulsive motions cease, leaving the person apparently in a profound sleep, from which he gradually recovers without having the smallest recollection of what has passed during the fit: he complains however of a general lassitude, torpor, and a heaviness about the head. During the convulsions, the pulse is quick and irregular, but upon their cessation, returns to its natural state. The fits are very apt to recur during sleep.

Causes.—The children of the poor, and those who are brought up badly, are most liable to epileptic attacks; hence great irritability of the nervous system and a delicacy of constitution very much predispose to the disease. In some there exists an hereditary predisposition to it. The exciting causes of epilepsy are violent emotions of the mind, fits of passion, a sudden fright or surprise, over-distention of the vessels of the head with blood, acute pain, teething, worms, the suppression of some accustomed discharge, excessive evacuations, tumours compressing the brain or any part of the nervous system, preternatural projections of the internal surface of the skull bone, and collections of a watery fluid or purulent matter within the head. Some diseases are ushered in by an epileptic fit, such as the small pox, measles, and scarlet fever. By the ignorant, the disease has very improperly been considered as owing to the agency of evil spirits, or they have imputed it to fascination and witchcraft.

Epilepsy may readily be distinguished from convulsions of an ordinary kind, by the total abolition of the senses, and its terminating in profound sleep; from apoplexy, by the voluntary motions being increased in the former disease, in the other totally suspended; and from hysterics, by the profusion of limpid urine, by the sensation of a ball in the throat, by the laughing, crying, and such other symptoms as usually accompany this disorder.

Epilepsy is a disease not unfrequently simulated by impostors, and often by soldiers and seamen with the view of obtaining their

discharge from service. As in the epileptic fit the pupils of the eyes are always perfectly insensible to light, the application of a candle to these organs is usually recommended as a criterion; but this method of detection is not always satisfactory. In doubtful cases, the introduction of some dry pungent snuff into the nostrils, by being blown through a quill, will produce immediate and violent sneezing if the fit is feigned; whereas in true epileptic fits no effect will arise or be perceived.

There being no hereditary predisposition, the disease being merely sympathetic, occurring before the age of puberty, and arising from causes easy of removal, are to be considered as circumstances of a favourable nature; but when the disease comes on after the person has attained the age of puberty, when it has arisen from an hereditary predisposition, or by frequent returns has become confirmed, especially where the memory and judgment have been much impaired, or the disease has been occasioned by an irremoveable cause, our opinion as to the event must always be unfavourable.

Treatment and Regimen.—The objects to be kept in view in the treatment of epilepsy are to abate and shorten the duration of the fit, and when it goes off to prevent as much as possible its recurrences.

In general, little more can be done during the fit than to take the necessary precautions to prevent the patient from injuring himself in the violence of the convulsions; but where it is of long duration, and severe, cataplasms of mustard (see the Class of Stimulants, P. 13,) may be applied to the extremities, and a blister between the shoulders, whilst the nostrils are also stimulated by volatile salts or spirits. An antispasmodic clyster, composed of half an ounce of the tincture of assafœtida, sixty drops of laudanum, and about eight ounces of thin water gruel, may possibly afford some relief.

After the fit has gone off, its recurrences are to be prevented by removing, if possible, the cause; and therefore the attention should be directed to the discovery of this. If proceeding from worms, these must be destroyed by vermifuge medicines and other remedies recommended under the head of Anthelmintics. See this Class. If from debility, with marks of a relaxed habit, the whole frame must be strengthened by moderate exercise, the use of a cold bath, and medicines of the invigorating and tonic kind, such as Peruvian bark, sulphate of quinine, preparations of steel, the oxyd of zinc, ammoniated tincture of iron, sulphate of copper, nitrate of silver, &c. See the Class of Tonics, P. 9, 16, 17, 22, 23, 26, 27, and 28. Chalybeate waters may also be drank with advantage.

In administering the nitrate of silver, we should carefully attend to its consequences, as it is apt in particular constitutions to induce a blue colour over the whole body, as if it had been long immersed in a strong solution of indigo; and this unpleasant effect is apt to

continue throughout the life of the person. A case of this nature is almost daily presented to me in the city of Salisbury, the place of my residence.

Where the disease seems to arise from an excess of irritability of the nervous system, this must be obviated by antispasmodic medicines, such as æther, camphor, valerian, musk, volatile salts and spirits, the fetid gums, various forms of which are given under the head of Antispasmodics. See this Class. A moderate use of generous wine at the same time will prove beneficial. When the attack of the disease can be foreseen, a large dose of opium (such as forty drops of its tincture) combined with one drachm of æther and ten drachms of camphor mixture, may greatly mitigate its violence or wholly prevent it. An emetic, given an hour before the approach of the fit, has likewise been found, in many instances, to prevent its taking place.

The oil of turpentine has produced a very good effect in several cases of the disease in question, and may be administered in the form of an emulsion, prepared by diffusing the oil by means of honey or mucilage of gum acacia in some aromatic water, such as that of pimento. Half an ounce of this, containing from half a drachm to a whole one of the oil, may be taken three times a day in a tea-cupful of milk or thin gruel.

If the paroxysm be preceded by a tremulous sensation, beginning at the lower extremities, and gradually extending to the head, we may apply a blister to the part from which the sensation arises, or we may cut off the communication with the brain by means of a ligature applied tight round the limb.

Electricity has sometimes been found beneficial in the cure of epilepsy.

In those cases which seem to proceed from an overfulness of blood, or too great a determination of it to the head, it may be proper to resort occasionally to bleeding from the arm or jugular vein, proportioning the quantity of blood drawn off to the age and habit of the patient. It may also be necessary under such circumstances to give frequent purges; and should these means not prove efficacious, issues should be inserted between the shoulders, or a seton be put in the neck. Where there is a delicacy of constitution and obvious debility, such remedies would be highly improper.

Epileptic patients should guard against all violent passions, whether of anger, fear, terror, joy, &c., keeping their minds as cheerful as possible. They should take care never to be employed on elevated buildings, or ride on horseback, lest a fit should happen to come on at the time, and they be precipitated to the ground. They should breathe a pure free air, take regular exercise, but avoid as much as possible the extremes of heat and cold. The diet of such persons ought to be light, but nourishing and easy of digestion, carefully abstaining from such vegetables as are apt to create flatulency. A change of climate and mode of life might possibly have a good effect.

OF THE DANCE OF ST. VITUS, OR CHOREA.

This is a disease somewhat of a similar nature with epilepsy, as the patient is much agitated with strong motions and considerably convulsed; but generally the spasms are confined to one side, and principally affect the arm and leg.

Symptoms.—The lower extremity is at first most affected; there is a kind of lameness or weakness in one of the legs, and although the limb be at rest, the foot is frequently agitated by involuntary motions, turning it alternately outwards and inwards. In walking, the affected leg is not lifted in the usual manner, but is dragged along as if the whole limb were paralytic; and when it is attempted to be lifted, the motion is unsteadily performed, the limb becoming irregularly and ludicrously agitated. The motions of the arms likewise are variously performed, and they are drawn by convulsive retractions in a contrary direction to what was intended. If a glass of liquor be put into the hands to drink, the person cannot direct it properly to his mouth, but uses many odd gestures, and when it reaches the lips he drinks very hastily. The tongue also participates of the general disease, so as to render articulation nearly unintelligible; it is thrust out of the mouth involuntarily, and the head is affected. If the disease continues long, the constitution becomes injured, sleep is interrupted, the mental faculties are impaired, childishness ensues, and the body and limbs become emaciated.

Causes.—Irritability of the nervous system and general weakness, various irritations, as teething, worms, offensive smells, and affections of the mind, such as fright, horror, anger, &c., are the most common causes of the Dance of St. Vitus; but it now and then arises from sympathy, or associating closely with those who labour under the disease, as I have witnessed in several cases. Females are more liable to its attacks than males, and young people from the tenth year of their age until their attaining that of puberty.

It is seldom attended with dangerous consequences unless very violent, but it not unfrequently passes into epilepsy.

Treatment and Regimen.—Respecting the plan to be adopted for the removal of the disease, we should be guided by attentively investigating the cause which has given rise to it. If it has proceeded from any kind of irritation, and particularly indurated feculent matter in the intestines, this should be removed by giving every now and then a smart dose of jalap combined with the submuriate of mercury. See the Class of Purgatives, P. 1. If from worms, these should be destroyed by proper medicines, as recommended under the head of these vermin; and if from teething, the gums must be scarified. If this is not effectual, the irritating tooth should be extracted.

The disease being, however, most prevalent in persons where there is an excess of irritability in the nervous system, or where there is general weakness, the views of the physician have more generally been directed to increase the tone of the muscular system by tonics persevered in for a sufficient time, and then to resort to antispasmodics and other remedies of the like nature, as pointed out under the head of Epilepsy.

The tonics most likely to prove advantageous are those of the mineral class, such as the oxyd of zinc, sulphate of zinc, ammoniated tincture and other preparations of iron, ammoniated copper, and nitrate of silver, various forms of which are given in the Class of Tonics; and their effects may be much increased by cold bathing, particularly in the sea, and electricity at the same time.

When the disorder is subdued, a complete restoration of health and vigour of body is best effected by the use of a generous nutritive diet, with a moderate quantity of wine, and proper regular exercise taken daily in the open air on horseback.

OF THE CRAMP AND LOCKED JAW OR TETANUS.

In this disease there is a painful contraction of the muscles of the neck, and trunk of the body, and it has been variously named according to the parts affected by the spasms; but it is sufficient for practical purposes only to notice general cramp or tetanus, and the locked jaw or trismus, in which the teeth become so closely set together as not to admit of the smallest opening between the upper and lower jaw.

Both affections may be considered either as symptomatic or original; the former arising in consequence of some irritation of the nerves from a local injury, as punctures, lacerations, gun-shot wounds, and various surgical operations; the latter from exposure to a moist and cold atmosphere. They are both of more frequent occurrence in warm climates than in cold ones, and they attack both sexes of all temperaments and ages, but males more frequently than females, and those of a robust constitution oftener than those of a weakly one. The presence of irritating substances in the stomach or intestines, and affections of the mind, have been found capable also of sometimes producing tetanus or general cramp.

Symptoms.—At first there is a stiffness in the back part of the neck, rendering the motion of the head painful and difficult, some impediment to swallowing, a pain at the chest, shooting from thence to the back, spasmodic affection of the muscles of the neck, and rigidity of the lower jaw, which continuing to increase, the teeth become at length so closely set together as not to admit of the smallest opening. These constitute the disease called the locked jaw.

If it proceeds further, a greater number of muscles become

affected, as those of the spine bending the trunk of the body forcibly backwards or else forwards.

In process of time every muscle almost of the body partakes of the disease; those of the belly are strongly retracted, hence suppression of urine or costiveness are generally produced, the extremities are rigidly extended, the forehead is drawn up in furrows, the cheeks backwards towards the ears, the eyes are immovable in their sockets, the tongue occasionally protruded beyond the teeth when the jaws are not firmly closed, and the whole countenance exhibits a high degree of distortion. Most excruciating pains are experienced by the violence of the contractions in the stiffened parts. A remission of the spasms takes place perhaps every ten or fifteen minutes: but from the slightest cause, even the least motion of the patient or touch of an attendant, they are renewed with aggravated torture. Should the disease be suffered to go on uncontroled, or resist whatever means are employed to subdue it, one universal spasm at length destroys the patient.

The danger of the disease is to be estimated from the cause which gave rise to it, and the manner of the attack. There will, in every case, be great reason for apprehension, but more so when it arises from an injury of some nerve than when proceeding from an exposure to cold; when it comes on suddenly, and advances quickly to a severe degree, than when slow in its progress; when the spasms quickly succeed each other, and are excited by very trivial causes, than when there is a considerable interval, and rigidity forms the chief feature of the disease, instead of violent contractions of the muscles.

Treatment and Regimen.—The first object to be attended to is to ascertain the cause of the disease. If it has arisen in consequence of a puncture or small wound, which has been supposed to have partially divided a nerve, a free dilatation of the wound should immediately be made, after which it should be carefully examined and cleared of any extraneous substance, such as a thorn, splinter of wood, or bit of broken glass which may have lodged in it and excited irritation. After this, a small quantity of the tincture of opium may be poured into the wound, and a pledget spread with some digestive ointment, such as the yellow basilicon, be laid over it. Every time the dressing is renewed, which should be done at least morning and night, the wound ought to be wetted with the solution of opium. After the dilatation of the wound, so as to cut through the tendinous and nervous fibres sufficiently, some medical practitioners have recommended to dress it with lint, moistened in the oil of turpentine instead of the tincture of opium, so as to excite an inflammation in it, and which they conjecture may be likely to cure the convulsive contractions.

But if the cause be not discoverable, or indeed whether ascertained or not, the irritability of the system must be attempted to be relieved, and the disposition to spasms conquered, which is to be done by the most powerful antispasmodics, as opium with

musk, camphor, and æther. It will always be best to begin with a moderate dose of the opium, and gradually increase it, directing our attention to the effect it produces on the patient, and not to the quantity which is taken, as an ounce of its substance has been known to have been administered in the course of the day and night in cases where the spasms have been very violent and returned frequently. If we give opium in a solid form, we can begin with two grains of this, eight of camphor, and six of musk, formed into a bolus or pills of a proper size, with a little of confection of orange or the like; which dose may be repeated every four or six hours, washing it down with any kind of liquid. If the patient gives a preference to medicine in a fluid form, we may begin with a draught, consisting of ten drachms of camphor mixture, half a drachm of æther, and fifty drops of the tincture of opium, and this is to be taken every two or three hours. In both of these prescriptions, the dose of the opium is to be gradually increased the succeeding day, if found to produce no evident or good effect.

If the patient is prevented from taking medicine by the mouth, in consequence of the jaws being firmly locked together, it may then be necessary to extract some of the front teeth if they are perfect, so as to enable the attendants to administer not only his medicine but likewise food. If he has also lost the power of swallowing, then both of these must be given in clysters. Strong animal broths of mutton and beef, in the quantity of six or eight ounces, with an addition of forty or sixty drops of the vinous tincture of opium, may be injected every four hours.

The oil of turpentine has been found an excellent remedy in some spasmodic diseases, and is therefore worthy of a trial in this, both by the mouth as likewise in the form of a clyster. If the patient can swallow, make trial of half an ounce in a little gruel every three hours, but if not, one ounce of it may be rubbed down, and mixed by means of the yolk of an egg with about eight ounces of thin gruel, adding to the whole sixty or eighty drops of the vinous tincture of opium. This clyster may be repeated again in the course of the day, if it seems to relieve or abate the spasms.

In the mean time the warm bath may be made use of, and when the patient is taken out, he must be wrapt in warm flannels, and put in bed: the belly is then to be fomented with woollen cloths, wrung out in warm water or a strong decoction of bruised poppy heads, and a bladder half filled with hot water be applied to the pit of the stomach. Between whiles, the parts most affected by convulsive contractions may be well rubbed with equal parts of camphor liniment and tincture of opium. This mode of employing opium as well as in clysters, in those cases where the power of swallowing is taken away, is highly worthy of attention.

The cold bath has been strongly recommended in tetanic affections, and may be used if no advantages are derived from em-

ploying a warm one. The best manner of applying it will be to pour two or three pails full of very cold water over the body of the patient every three or four hours. I can bear testimony to the good effects of this remedy, as during my practice in the West Indies many years ago, I employed it in several instances with success, but they all arose from an exposure to moist cold air, and not from any punctured or lacerated wound.

In tetanus arising from a wound or puncture, the warm bath is certainly entitled to a preference over the cold, being at least a soothing remedy for the sufferings which a genuine paroxysm of tetanus never fails to inflict. It reduces the frequency of the pulse, moderates and equalizes vascular action, relaxes the muscular fibres, removes their rigidity, and disembarrasses the organs of respiration.

The late Dr. Rush of Philadelphia, was in the habit of substituting the Peruvian bark and wine instead of opium in tetanic affections, and was accustomed to give his patients three ounces of the powder of the former in three pints of the latter within the space of twenty-four hours, by which means, it is said, he soon relieved them.

A similar plan has been pursued by other physicians in America with success, but more particularly by Dr. Hosack, professor of medicine in the College of New-York.

Mercury administered internally, as well as applied externally, in the form of unction, so as to excite a salivation, has also been employed; but on all such occasions the aid of opium, as likewise of the warm bath, should always be added.

Costiveness is a constant attendant on tetanus, and should be removed by the frequent exhibition of some aperient medicine (see the Class of Laxatives, P. 3 or 12), if the patient is capable of swallowing, but if not, by an active clyster. See Purgatives, P. 6. In many instances the evacuations which are procured have not the appearance of feculent matter, but still they are highly offensive in smell.

Throughout the whole course of the disease the strength is to be properly supported with wine, mixed with such nutritive articles of diet as the patient can swallow; and when this power ceases, clysters of animal broths, gruel, &c. may be substituted.

OF THE CRAMP IN THE STOMACH.

This affection is most incident to persons in the decline of life, especially the gouty, nervous, hysterical, and hypochondriacal. It frequently comes on suddenly, is very dangerous, and requires prompt assistance.

Should there be a sickness or vomiting attendant on it, the stomach ought to be washed out with a little chamomile tea. After this, if the bowels are confined, we may direct a laxative clyster

to be administered. From sixty to seventy drops of the tincture of opium, with one drachm of æther, and an ounce of camphor mixture, may immediately be taken as a draught, and this be repeated in two or three hours if considerable relief is not obtained.

In the mean time the region of the stomach ought to be fomented well with flannel wrung out in warm water, or a bladder filled with hot water be kept constantly applied over it. If this does not give ease, the part should be rubbed from time to time with a liniment consisting or an equal proportion of tincture of opium and hartshorn.

If the stomach is in too irritable a state to retain the draught, the tincture of opium may be given in the form of a clyster, with eight or ten ounces of thin gruel, and half an ounce of the oil of turpentine, and this may be repeated as the occasion shall seem to require.

When the cramp in the stomach takes place from a translation of gouty matter from the extremities, immediate recourse must be had to some cordial, such as a glass of brandy, or three tablespoonsful of the following mixture, repeated every hour: Take peppermint water and spirit of carraway three ounces of each, æther two drachms, fetid spirit of ammonia two drachms, and tincture of opium one hundred drops. Blisters should also be quickly applied to the ankles to restore the gout to its former seat, and the region of the stomach be well rubbed with the liniment before advised.

If the cramp in the stomach has arisen from the suppression of any usual discharge, such as menstruation, and if the pains are violent and of any duration, some blood ought to be taken from the arm, unless the patient is in a debilitated state.

OF THE HICCUPS.

This uneasy and often distressing complaint consists in a convulsive or spasmodic affection of the muscles subservient to deglutition and the midriff or diaphragm, and arises from any cause that excites irritation in these parts, such as excess in eating or drinking, or from food of an acrid nature received into the stomach. It is often an attendant on hysteric and some other affections, and frequently arises in gangrene and malignant fevers; occasionally it takes place without any preceding disease, and therefore it has been usual to consider it of two kinds, either as an original disorder or only symptomatic.

When the complaint attends on gangrene, malignant fevers, and other acute diseases, it is to be looked on as a fatal symptom, being usually the forerunner of death.

If the complaint is original, and proceeds from an acidity in the stomach, a little magnesia or prepared chalk, mixed in an ounce of peppermint or cinnamon water, will be likely to afford relief; but

if it fails in doing so, the irritating matter should be evacuated by a gentle emetic. After which, the Peruvian bark and stomachic bitters, with a few drops of diluted sulphuric acid conjoined to each dose (see the Class of Tonics, P. 8, 9, and 10), may be administered.

When these means do not answer and the complaint becomes obstinate, the most powerful antispasmodics must be given. From twenty to forty drops of the tincture of opium, with one drachm of æther, in an ounce and a half of camphor mixture, must be taken every three or four hours until decided relief is obtained, when the medicine should be administered with longer intervals. If the complaint does not give way promptly, the musk draught, as in the Class of Antispasmodics, P. 4, may be tried. External applications may also be resorted to, such as rubbing the region of the stomach frequently with strong volatile liniment, or equal parts of tincture of opium and camphorated spirits. If these likewise prove ineffectual, a large blister had better be applied over the part.

The milder kind of hiccup is often removed by any sudden fright or agitation of the mind, as also by taking a few small draughts of cold water in quick succession, retaining the breath at the same time for a considerable space. When the complaint arises at the close of any acute disease, mortification, &c. it will be needless to harass the patient with medicine, as the cessation of life is near at hand, and it cannot be prolonged by any medical aid.

OF THE ASTHMA.

Asthma is an affection of the lungs, returning at intervals, and attended with great difficulty of breathing, tightness across the chest, a wheezing noise, and cough. It is commonly divided into the humid and dry ashma, according as it happens to be accompanied with expectoration or not.

Symptoms.—Asthma is frequently preceded by a disinclination to motion, loss of appetite, flatulency at the stomach, and frequent eructations, and there is a sense of tightness and oppression at the chest, attended more or less with coughing. These symptoms usually make their approach in the night time, and the patient finds some difficulty in lying in an horizontal posture, and at length is obliged to sit upright to escape suffocation; he is scarcely able to speak or expectorate, and his breathing becomes more difficult, and is accompanied by a severe wheezing. During the height of the paroxysm he seeks for a free cool air, and is therefore obliged to quit his bed; he sweats about the neck and forehead, and sometimes when he coughs a little frothy mucus matter is brought up with difficulty. The pulse is usually small and weak, and the urine pale, but is discharged in sufficient quantity.

The violence of the fit is generally about midnight, but towards morning a remission takes place, the breathing becomes less la-

borious, and the person coughs and speaks with greater ease, and at length he falls asleep. On his awaking, he still feels some oppression at his chest, and cannot bear the least motion without rendering this more uneasy, but he cannot remain in bed without having his head and shoulders considerably elevated by additional pillows. After eating, especially a full meal, there is much flatulence in the stomach, with drowsiness and increased difficulty of breathing. Towards evening the symptoms return as violent as before. Some nights having been passed in the same manner as the first, the attacks of the disease become less severe, and there are longer remissions between them, particularly if there is a copious expectoration, and at last they cease altogether, the patient being restored to his former state, the urine having acquired a higher colour, and sometimes depositing a sediment. There is, however, great uncertainty as to the duration of the paroxysm; for sometimes it will terminate in three or four hours: at others, it will continue for as many days, and in some cases it is extended to a fortnight or three weeks without any material intermission.

Causes.—The persons most subject to asthma are those of a sanguine habit, with small vessels and a contracted chest; the intemperate, and such as have been debilitated by excessive hemorrhage, or in whom any accustomed evacuations have been suppressed; those also in whom cutaneous eruptions have been unseasonably checked, or have had ulcers dried up; but particularly those who are much oppressed with flatulence and other symptoms of indigestion.

Sudden changes of temperature, a cold and moist atmosphere, irritation of the lungs by aerial acrimony or other causes, irritation of the stomach, bowels, and other contents of the belly, retrocedent gout or rheumatism, the suppression of some accustomed discharge, obstructed perspiration, and strong emotions of the mind, as fear, grief, or sudden surprise, may be considered as the exciting causes of the disease. Spasmodic constriction of the air vessels or cells of the lungs, has been assigned by some as the immediate cause.

When asthma arises from accidental causes, it is more easy to cure than when spontaneous or the consequence of predisposition, and when it occurs in an early period of life, and in an unimpaired constitution than when it comes on at an advanced age, and in a debilitated frame. The paroxysms returning frequently and continuing long, tremulous respiration, a weak irregular pulse, palpitations at the heart, scarcity of urine, dropsical swellings of the lower extremities, and symptoms indicating a collection of water in the chest, are to be looked upon as very unfavourable: they denote that, sooner or later, there will be a fatal termination of the disease in all probability.

Treatment and Regimen.—In treating asthma judiciously, our attention should, in the first place, be directed to moderate the violence of the paroxysms during their continuance, and after-

wards to retard their recurrence as much as possible, if not wholly prevent them.

In young subjects of a full and plethoric habit and at the commencement of the disease, it may prove beneficial to open a vein in the arm and detract some blood ; but in thin spare habits, or where weakness or advanced age present themselves, as likewise where the cough is accompanied by a free expectoration, bleeding would be highly improper and injurious.

In most cases it will be advisable to begin the cure by throwing up into the intestines a clyster composed of a drachm of assafœtida dissolved in an infusion of senna, adding thereto an ounce of castor oil. If the breathing is much oppressed, the feet and legs should be immersed in warm water, a bladder filled with the same or blister be applied to the chest, and the steams arising from a hot infusion of chamomile flowers, with an addition of vinegar or a little æther, be frequently inhaled ; or we may substitute the vapour arising from a tea-spoonful of Hoffman's anodyne liquor, and an equal quantity of the tincture of opium, mixed with a little warm water, continuing the process of inhaling for half an hour at a time. In those cases where a spasmodic difficulty of breathing exists, as is usually the case in paroxysms of the dry asthma, we should also have recourse to Antispasmodics internally. A draught consisting of one ounce and a half of camphor mixture, one drachm of sulphuric æther, thirty drops of the tincture of assafœtida, and six of that of opium, may be given every four or six hours, until the spasmodic affection is relieved.

Should this desirable point not be obtained after a sufficient trial of these means, the patient may have recourse to smoking. If tobacco is unpleasant, he may substitute the common white poppy heads in a bruised state ; and if these do not answer, the dried roots of the thorn apple, (stramonium) cut into small pieces, may be put into the pipe and smoked. As this, however, is a strong narcotic, and occasionally produces a powerful effect in this way, some caution is to be observed in not using it too freely.

In the dry or spasmodic asthma, a cup of very strong coffee without either milk or sugar, and repeated, if necessary, at the distance of a quarter or half an hour, has been known to remove the fit entirely ; and some who have been afflicted with the disease for many years, have seldom failed to receive relief from it during a paroxysm.

Where expectoration is difficult or scanty, a free discharge of this should be promoted by pectoral medicines, such as squills, gum ammoniac, small doses of tartarized antimony, &c., (See the Class of Expectorants, P. 1, 2, or 3) assisted by inhaling the steam arising from warm water and vinegar, putting the feet occasionally into a deep tub filled with water properly heated, or making use of a warm bath.

Asthma, when long protracted, or arising in persons of an advanced age, is very apt to be attended with an effusion of serous

fluid in the chest; and therefore, in all such cases it will be advisable to join the foxglove (digitalis) to the pectoral medicines we administer during the continuance of the disease, as well as in the intervals. This medicine is an excellent diuretic, and may be given either in substance, in the dose of half a grain three or four times a day mixed with the squill pill, or in that of a liquid. See the Class of Diuretics, P. 5 or 6.

To retard or prevent the recurrence of the paroxysms, the patient must carefully guard against, and avoid all the causes which have been mentioned as likely to excite them. If the complaint should depend on some other disease, that must be paid attention to, viz. if on retrocedent gout, blisters to the legs, and stimulating sinapisms to the feet, with such other means as will solicit the gout to the extremities. If on repelled eruptions, issues and blisters are required to afford drains for the acrid matter, together with mercurial alterative medicines and diet drinks, to correct the acrimony of the fluids.

Emetics, by their power of determining the blood from the lungs to the surface of the body, and their supposed ability of assisting expectoration, have been found useful in most cases of asthma. It appears advisable, therefore, to give a gentle emetic of ipecacuanha occasionally during the intervals of the paroxysms, aiding its effect by afterwards exhibiting the pectoral medicines before recommended.

During the intermissions we should also have recourse to tonics, such as any of the preparations of Peruvian bark, stomachic bitters, preparations of iron, (see the Class of Tonics for various forms of these), and chalybeate waters. Cold bathing may also be used during the intermissions, and in addition to all these, the patient should take regular exercise every day when the weather will admit of it; but that of riding on horseback is infinitely the most preferable, observing that his clothing is warm and well adapted to the season of the year and the vicissitudes of the atmosphere.

The flatulency with which asthmatical persons are very apt to be troubled, may be relieved by some absorbent medicine, such as a drachm of magnesia mixed in a wine glass full of peppermint water, adding thereto about fifteen drops of the solution of potash. During the intervals of the paroxysms, the bowels should be kept regular, but rather open, by some gentle laxative, such as rhubarb and magnesia.

The diet of asthmatical persons should be confined to such things as are light and easily digested, cautiously abstaining from most kinds of vegetables, and such other articles as are apt to excite flatulence. For ordinary drink, they may use toast and water, and such like diluting liquors, avoiding beer, ale, and other malt ones. If the patient has been accustomed to take tea in the morning and evenings, he had better substitute coffee. The situation and air should be such as he finds agree best with him, for there is no laying down any general rule as to this point, as some asthmatic per-

sons cannot live with any comfort in the atmosphere of a large city and crowded population; whilst others, again, feel themselves most easy in an air replete with gross effluvia. In general, however, a dry and settled atmosphere agrees best with asthmatics, and a removal from a cold to a warm climate is often found beneficial. Many have enjoyed tolerable good health in the south of France, Portugal, Spain, and Italy, who in this country had suffered much from attacks of asthma, particularly during the winter months.

OF THE COLIC.

The colic is accompanied by costiveness and an acute pain in the bowels, particularly round the navel, and not unfrequently there is a spasmodic contraction of the muscles of the belly.

The disease has generally been considered as of different species, and has been denominated according to the cause from which it has proceeded, such as the flatulent; the bilious; and the hysteric or nervous; but in all of them there is evidently a spasmodic constriction in some part of the intestinal tube.

In the flatulent colic there is costiveness, attended with soreness, pain and gripings in the bowels, much flatulency accompanied by a rumbling noise, distention of the stomach, nausea, and oftentimes a coldness of the extremities.

The bilious colic is characterized by a bitter taste in the mouth, loss of appetite, costiveness, thirst, some febrile heat, a vomiting of bilious matter, and an acute pain about the region of the navel; and as the disease advances, the former becomes more frequent, and the latter more severe and of longer duration.

In the hysteric colic there is usually a dejection of spirits, costiveness, nausea, and sickness at the stomach, and severe pain and spasms in the bowels.

Causes.—Colics are occasioned by a variety of causes, such as crude and acescent food, an indiscreet use of unripe fruits, flatulent vegetables, fermenting liquors, obstructed perspiration, a redundance of acrid bile, hardened fœces accumulated in some part of the intestinal canal, a translation of gout or rheumatism to the bowels, exposure to cold, and the having swallowed substances of an acrid or poisonous nature or cold beverages when the body is much heated by exercise or crowded rooms, &c. Hysteric affections sometimes give rise to colic.

The colic, when attended with very obstinate costiveness, and an evacution by the mouth, or vomiting of what is naturally discharged by stool, is known by the name of Iliac passion. When in the disease one portion of the gut insinuates itself within another, thereby forming a blind pouch as it were, the term intus-susceptio is applied. In both of these cases, a high degree of inflammation soon takes places in the intestines.

The colic is to be distinguished from an inflammatory affection

of the intestinal canal, by a diminution of the pain upon pressure on the belly with the hand; by the muscles of the belly being spasmodically contracted, and having a lumpy feel; by the state of the pulse; and by the absence or trifling degree of fever; whereas the reverse of these takes place in the latter disorder.

We are to regard in a favourable light the pain remitting or shifting its situation frequently, stools being obtained by the aid of medicine, and ease being found by the patient after any discharge of wind or feculent matter; but the sudden cessation of pain with costiveness continuing, cold sweats breaking out, a weak tremulous pulse, faintings, and hiccups, evidently denote approaching dissolution, in consequence of a mortification having taken place in some part of the intestines.

Treatment and Regimen.—To guard against any inflammatory tendency in persons of a vigorous habit of body, and where the pulse is strong, full, and quick, and the symptoms set in with severity and proceed with violence, it will be advisable in colic under these circumstances to open a vein in the arm, and draw off some blood, regulating the quantity by the effect produced on the pulse, and the appearance upon cooling of what is taken away. If the former becomes softer and rises after the operation, and the latter throws up a buffy coloured coat on its surface, we are to look upon these not only as fully justifying the propriety of bleeding, but evidently pointing out the necessity of its being again repeated.

In the flatulent colic, the object to be kept in view is to promote a discharge of wind both upwards and downwards, procuring motions at the same time. For this purpose, the patient should immediately take some purgative of an aromatic warm nature, such as an ounce of the compound tincture of senna, or the same quantity of that of rhubarb, together with two drachms of the tincture of cardamoms. Flannel cloths wrung out in a warm decoction of poppy heads or common water, may also be kept constantly applied over the region of the belly; and if these means do not quickly mitigate the pain and promote stools, we may direct an aperient and carminative clyster (see this latter Class, P. 9), to be injected every four or six hours. After stools are procured, opium combined with some aromatic, may be given in the form of a draught, as follows: Take one ounce of peppermint water, half an ounce of the spirit of carraway, and thirty drops of the tincture of opium.

In the bilious colic, after having premised bleeding, if judged necessary from the violence of the symptoms, we may direct emollient clysters of thin gruel to be administered, to each of which has been added an ounce of the sulphate of soda, or Epsom salts with a little sweet oil, and this is to be repeated frequently, until the contents of the bowels are freely evacuated. The patient is at the same time to drink plentifully of any diluting liquor, such as barley water, or gruel acidulated with the supertartrate of potash or lemon juice, or of a solution of preserved tamarinds, to which a little

manna has been added. Between whiles he may take a little chicken broth.

Should the vomiting be very severe, and not restrained by these diluent liquors, it will be advisable to give a saline draught in the effervescing state, with about thirty drops of the tincture of opium added to each, and this may be repeated according to the urgency of the symptoms.

It will also be necessary to foment the belly with flannel cloths wrung out in a decoction of chamomile flowers and bruised poppy heads; and where these are not at hand, in common hot water. If this remedy does not afford relief, the patient should be immersed up to the chest in a warm bath, taking care to remove him as soon as he perceives himself threatened with faintness. The stomach may then be well rubbed externally with an embrocation consisting of one ounce and a half of camphorated spirits, and half an ounce of the tincture of opium. Should these means also not be attended with the desired effect, a clyster of thin gruel, or chicken broth, with an addition of from forty to sixty drops of the above tincture, may be administered.

It will seldom be necessary to make use of evacuation by means of aperient medicines in the hysteric colic; but should costiveness prevail, it may be removed by some gentle laxative, administering at the same time a clyster, composed of eleven ounces of thin gruel and about half an ounce of the oil of turpentine. This is a valuable remedy in the hysteric colic. If any vomiting attends the complaint, the stomach may be relieved by a cup full or two of chamomile tea, after which the patient may take a composing draught. See the Class of Anodynes, P. 6.

Those who are subject to attacks of cholic should carefully abstain from all kinds of food of a crude and flatulent nature, and from fermented liquors; they should likewise never suffer their bowels to be long confined, and as much as possible avoid exposure to wet and cold.

In colic complicated with the Iliac passion, and where there is inflammation or a decided tendency to it, evidenced by some shivering and a full pulse, blood should be drawn freely and even repeatedly from the arm, whether the patient be of a strong and robust or of a delicate constitution.

The next points to be attended to are a removal of the spasmodic pains or griping, and the restoration of the intestines from a state of inverted action to their proper motion, and hereby a resolution of the costiveness. For these purposes, a warm bath, hot fomentations, tepid and copious clysters moderately impregnated with purgative ingredients, and castor oil (See the Class of Laxatives, P. 16), the application of a blister to the belly, and opium given by the mouth combined with calomel, are requisite. If these means fail, we may make use of the Croton oil as advised in the succeeding disease, assisting its effects by administering from time to time an emollient clyster, either with or without an addition of

tincture of opium, in the quantity of forty or fifty drops. See Class of Emollients, P. 3.

OF THE SPASMODIC OR DEVONSHIRE COLIC, AND DRY BELLY-ACHE.

The disease is marked with violent and excessive pains about the region of the navel, shooting from thence to each side, obstinate costiveness, a vomiting of acrid bile, and strong spasms in the intestines and muscles of the whole belly.

Symptoms.—Spasmodic colic commences with a sense of weight or pain at the pit of the stomach, extending down to the intestines, accompanied with paleness or sallowness of the countenance, slight sickness at the stomach, thirst, anxiety, and costiveness. The pain then increases gradually, and from wandering about, becomes fixed somewhat about the region of the navel, from whence proceed painful dartings at times in various directions. A soreness and tenderness of the part occupied by the pain remains for some length of time after it has remitted. At length, a vomiting of bilious matter comes on, there is a frequent inclination to go to stool, although the efforts for that purpose are ineffectual, the urine is diminished in its usual quantity, the pulse is quick but contracted, the muscles of the belly are drawn up into hard irregular knots or lumps, and the intestines themselves exhibit signs of violent spasms, insomuch that a clyster can hardly be injected from the powerful contraction of the gut within the fundament. If the symptoms are not soon relieved, the spasmodic affection increases in violence, invincible costiveness ensues, and an inflammation of the bowels terminating in mortification takes place, or the disease is converted into what is known by the appellation of the Iliac passion, wherein the excrements are thrown up by the mouth.

Causes.—This species of colic is brought on by cold applied either to the extremities or to the belly itself, by a free use of unripe fruits, by acrid food or drink, such as sour wines or cider, by an accumulation of acrid bile, long continued costiveness, and by inhaling the vapours arising from the fusion of leaden ore, or frequently handling some of its preparations; hence painters, glaziers, plumbers, miners, and smelters of this metal, are frequently attacked by it. The disease is of frequent occurrence in Devonshire and other cider counties, as also in the West India Islands; and in the former has been supposed to arise from an impregnation of lead received into the stomach in consequence of the apparatus used in the making of cider, or of some of the preparations of lead having been afterwards added to the liquor, either to prevent or destroy its tendency to acidity; for it is a well-known fact that dealers in this article, as well as in wine, do employ them for this purpose. See the Test to discover this impregnation, page 17.

The severity of the pain round the navel, the lumpy and con-

tracted state of the belly, the obstinate costiveness, and the patient giving a preference to a bent position of the body in consequence of its being the easiest to him, will enable us very readily to distinguish this species of colic from inflammation of the intestines, or any other disease of the belly.

In the colic which arises from the smelting of lead, or frequently handling its different preparations, the palsied hand and slightly contracted fingers, accompanied by spasm in the upper extremities or by any affection of the lower, supervene with remarkable uniformity, and clearly point out the cause from which the disease has originated.

The danger to be apprehended in the spasmodic or Devonshire colic, as also in the dry belly-ache of inter-tropical climates, will be in proportion to the violence of the symptoms and the length of time the disease continues. It frequently lasts for eight or ten days with very little intermission, the bowels continuing all the time obstinately bound, yet they yield at length and the patient recovers. He is, however, left in a very weak state, and not unfrequently palsy is the consequence; the hands and feet are much contracted, and there is an inability in their muscles to perform their proper office.

Treatment and Regimen.—The grand objects to be attended to in this species of colic, are to relieve or take off the spasmodic contraction, and excite the proper action of the intestines, taking care to guard against the consequences of ensuing inflammation where the attack is severe, the patient young and of a full habit, and the disorder of an obstinate continuance.

With the view of opening the bowels, some brisk purgative of the mercurial kind (see the Class of Purgatives, P. 1 or 3,) should be promptly exhibited, assisting its effects by an active clyster (see P. 6 or 7, of the same Class); the latter of which may be repeated as the occasion requires. To assist these means the region of the belly should be well fomented with flannels wrung out in a warm decoction of poppy heads, or a large bladder filled with warm water be applied over it. A warm bath may also prove a good auxiliary remedy.

If the spasms are very severe and are not relieved by these means, it will be advisable to try the effect of a blister to the belly or the inside of the upper part of each thigh. Should the pains be violent, with a strong pulse, and the patient youthful or of a full habit of body, he should be bled, proportioning the quantity of blood which is drawn off to his strength and the urgency of the symptoms; for if inflammation in the bowels comes on, it probably would terminate in gangrene. After bleeding from the arm, the application of ten or twelve leeches to the belly may be advisable if no relief is obtained by the former operation.

If we are fortunate enough to obtain evacuations by stool by the means which have been pointed out, we should then have recourse to opium to allay the spasmodic affection; and for this purpose,

from thirty to fifty drops of its tincture may be given every two hours or so, until the violence of the pain is much abated, and a disposition to sleep takes place, after which, it may be given less frequently and in smaller doses. Should the bowels, on the contrary, still continue obstinately costive and the spasms severe, we must then combine opium with whatever purgative medicines we administer. For this purpose, five grains of the submuriate of mercury, with six of the compound extract of colocynth, and one grain of opium, may be formed into pills with a little of syrup, and these be taken for a dose, repeating it every four hours until the desired effect is produced; or we may make trial of two drops of Croton oil with one grain of opium and three of aromatic confection made into a pill, this being a very active remedy, and likely to be of particular use, when, from irritability of the stomach, medicine of any bulk or quantity cannot be retained on it. The operation of the pills is to be assisted by administering an active clyster (See the Class of Purgatives, P. 5 or 6,) from time to time.

In case of all these remedies failing, we may make trial of a clyster of an infusion of tobacco, in the proportion of half a drachm of the dried leaves to eleven ounces of hot water, pouring off the liquor for use after half an hour's maceration. Some caution will, however, be requisite in the employment of this remedy, as it is apt to depress the living power in the system to so alarming a degree as to intimidate the by-standers, producing much fainting and cold sweats. It ought, therefore, only to be had recourse to in cases of emergency.

Placing the patient in a large tub, and dashing cold water over the belly and lower extremities, will sometimes procure copious evacuations by stool, when the warm bath, purgatives, opium, and the tobacco clysters have all failed. The application of cold in this way, determines the circulation or flow of blood inwardly, and occasions a copious secretion from the interior surface of the intestines, whereby a free expulsion of their contents frequently takes place. Under a failure of other means, this remedy is therefore worthy of a trial. To prevent the spasms from returning if stools are procured, it will be advisable to give small doses of opium, such as half a grain in each, repeating them from time to time. To guard against any accumulation of feculent matter in the bowels, which might reproduce spasmodic affection, it will be proper to give some mild laxative, such as castor oil, or a solution of the sulphate of magnesia occasionally, till all danger of a relapse seems to be removed.

To prevent this, it will also be proper that the patient most carefully avoids all exposures to cold or other exciting causes, such as sour fruits, acid, and austere liquors, &c. If he remains languid and weak after the disease has subsided, he must take exercise on horseback, and wine, with strengthening medicines. See the Class of Tonics. It may be of use to wear a piece of flannel swathed round the belly.

When a paralytic affection either of the hands or lower extremities succeeds an attack of this species of colic, a use of the Bath waters applied externally, either generally or upon the part affected, will be likely to afford great relief. If the disease has left behind it a palsied hand with a contraction of the fingers, and has arisen from frequently handling some of the preparations of lead, or from inhaling the fumes thereof whilst in a state of fusion, we may resort to a use of mercury with great benefit. A drachm of strong mercurial ointment may be rubbed morning and night on the wrists and forearm, until the mouth becomes sore. Should this not be found to answer, a grain of calomel should be taken every night, and occasionally a dose of castor oil.

In the colic with which painters are often affected, mercury with opium, followed by a solution of the sulphate of magnesia and other laxatives, assisted by clysters, is one of the best modes of cure.

The dry belly-ache of inter-tropical climates (by which appellation the disease is there known more than by that of spasmodic colic) is pretty much of a similar nature with the latter, and arises in most cases from an exposure to cold or a moist atmosphere; hence it often occurs in elevated situations not well cleared of wood.

On inspecting the bodies of those who have died of the disease in question, congestion and infarction of the liver have most usually been detected, and marks of inflammation and its consequences in a great many cases; hence to treat it properly, we should endeavour to excite the liver to a more healthy action, to remove the obstruction, if possible, by stimulating the biliary ducts through the medium of the intestines, and to obviate any tendency to inflammation which may chance to occur during the progress of our remedial measures.

In the dry belly-ache of inter-tropical climates the best plan of treatment in ordinary cases is, to give ten grains of calomel alone in the form of pills, and in four hours afterwards to administer five more conjoined with an equal proportion of the extract of colocynth. After waiting a due time for the effect, we may recommend an ounce of oil of turpentine to be taken in a little gruel, if the desired relief is not obtained. Should the bowels still continue inactive, a trial may be made of two drops of Croton oil, made into a pill with crumb of bread, throwing up into the intestines shortly afterwards an aperient clyster. See P. 7, Class of Purgatives.

To guard against the taking place of inflammation, blood should be drawn from the arm in proportion to the age and constitution of the patient; after which several leeches may be applied to the belly. A frequent use of the warm bath will be likely to afford much relief, occasionally interposing emollient fomentations, by wringing out flannel cloths in a hot decoction of bruised poppy heads and chamomile flowers.

EXCESSIVE DISCHARGES FROM THE STOMACH AND BOWELS.

Of a VOMITING and PURGING, or CHOLERA MORBUS.

This disease is owing to a superabundant secretion of bile which has become acrid and stimulant, and is diffused through the whole extent of the alimentary canal, bringing on an acceleration and inverted motion of the stomach and bowels, and by sympathy, producing spasmodic affections of the muscles of the belly, and a constriction of the upper portion of the intestinal tube.

Symptoms.—Cholera morbus often comes on suddenly and unexpectedly, but in some cases it is preceded by sour belchings, heartburn, flatulency, and pain in the stomach and intestines. To these quickly succeed excessive vomiting and purging of green, yellow, or dark coloured bile, together with violent griping pains and distention of the stomach. In India, little or no bile is apparent in the stools, as they usually consist of a watery or clayey-like matter in the early stage of the disease. The pulse is usually very quick and unequal, there is great thirst, and frequently a fixed acute pain about the region of the navel. The disease in its further progress, is accompanied by palpitations of the heart, coldness of the extremities, faintings, cold clammy sweats, an irregular and almost imperceptible pulse, great prostration of strength, cramps in the legs and thighs, and sometimes convulsions.

Causes.—The disease is most frequent in the summer and autumnal months, and more particularly attacks young persons. It often occurs in warm climates, particularly in the East Indies, where of late it has prevailed epidemically and under a highly aggravated form, and was, probably, owing to a peculiar state of the atmosphere. By some practitioners who were in India at the time of its prevalence, it has been attributed to that irregularity of the seasons which prevailed at its commencement, and afterwards continued a great length of time. In colder climates, the most manifest causes are very hot sultry weather, hard, indigestible substances received into the stomach, eating fruits of a cold nature, such as cucumbers, melons, &c. or any food which becomes sour in this organ, a redundancy and acrimony of the bile, the sudden application of cold to the body, or violent passions and other affections of the mind. Occasionally, it is the effect of strong emetics or acrid purgatives, or of poisonous substances taken into the stomach through mistake, or with the view to destroy life.

A gradual diminution of the vomiting and purging, followed by sleep and a gentle moisture on the skin, are to be regarded as favourable appearances, and pointing out the probable recovery of the patient; but great prostration of strength, much distention

of the belly, cold clammy sweats, a short hurried respiration, intermissions in the pulse, hiccups, and convulsions, may be considered as the forerunners of death.

Treatment and Regimen.—To abate the irritation of the stomach, which is the prominent feature at the commencement of the disease, and evacuate the acrid and redundant bile, it will be proper at this stage to direct the patient to drink plentifully of diluent liquors, as thin gruel, barley water, linseed tea, rice gruel, toast and water, or very weak chicken broth; and to assist their operation, a clyster of the latter or of beef tea may be injected every second hour. We may, at the same time, order flannel cloths, wrung out in a warm decoction of poppy heads, with the addition of a little camphorated spirits, to be kept constantly applied to the region of the stomach, rewetting them as soon as they lose their heat.

If the discharges are only moderate, and do not exhaust the patient, they may be allowed to go on for a proper time, that all the offending matter may be sufficiently evacuated; but should the patient become very faint and much weakened by the evacuations, or we think the stomach has been improperly cleansed by the diluent liquors, we ought then to allay, or put a stop to further irritation, by administering opium in sufficiently large doses. From one grain to one grain and a half, made into a pill, with a little aromatic confection, may be given without loss of time, repeating the dose every two hours as long as the urgency of the case seems to require it. If the pill is rejected by vomiting, twenty drops of the tincture of opium may by added to one ounce of the saline mixture in the act of effervescence, and this be taken every hour or two till it ceases.

To support the patient's strength and spirits it will be advisable to allow him generous cordials, such as warm negus with scraped nutmeg and other spices: and, to promote perspiration, his legs should be bathed in warm water and afterwards be wrapped in blankets. Heated bricks, or bottles filled with hot water, may likewise be applied to the soles of the feet.

If the disease resists these means, it will be advisable to administer opium also in the form of a clyster, by adding sixty or eighty drops of its tincture to about eight ounces of a thin solution of starch, and injecting one of these every four hours. It will likewise be proper to apply a blister of considerable size over the region of the stomach, as this will sometimes put a stop to excessive vomiting by its stimulus on the skin, and by sympathy affecting the internal parts.

Some cases of the cholera morbus, which had resisted the power of opium, have been successfully treated by an infusion of calumba with nitric acid. Under a failure of other means, we ought to make trial of these medicines, in the dose of six or eight drops of the latter to two ounces of the former; which draught may be repeated every three hours until the vomiting abates or ceases.

When the violence of the attack has subsided, an aperient (see the Class of Laxatives, P. 1), mixed with a little cinnamon water, may be taken to evacuate any acrid bile that may have remained in the bowels, lest by its continued application to the coats thereof, a recurrence of the disease should take place.

In cholera morbus there is uaually a great tendency in the spasms to return again, although they may seem to have ceased; and therefore it will be always advisable to continue the use of opium for some days, so as to keep up a due effect, carefully guarding at the same time against constipation by the aperient before advised, or any other of a mild nature.

The principal remedies usually resorted to in the treatment of the cholera morbus of India are, bleeding at the onset of the attack, but this more among Europeans than the natives, with the prompt administration of calomel, opium, and other antispasmodics. Calomel is there given in doses of fifteen grains, combined with two grains of opium in substance, or closely followed by sixty to one hundred drops or more of its tincture. Should the first dose be rejected, it is again repeated and continued without any regard to quantity, according to the urgency of the symptoms. In conjunction with these remedies, the compound spirits of ammonia, æther, peppermint water, and other stimulants are sometimes employed as useful auxiliaries.

When bile makes its appearance in the stools instead of the watery or clayey matter usually attendant on cholera in India, it is deemed a sure sign that the remedies have proved effective, and that amendment will take place. After these effects are obtained, it is generally necessary to give some mild laxative medicine, such as the carbonate of magnesia.

Very particular attention should be paid by the patient to diet on his recovery from cholera morbus in every climate, and he ought carefully to abstain from all such things as might be likely to bring on a recurrence of the disease: he is therefore to make use only of such articles as do not readily become acescent, and they should be taken in small quanities at a time, and be nourishing. To restore the lost energy of the stomach and intestines, an infusion of calumba conjoined with the Peruvian bark (see the Class of Tonics, P. 8), and sharpened with a few drops of dilute sulphuric acid, may be taken every noon and evening for some time. Moderate exercise, used daily and regularly, will much assist the tonic effect of the medicines; but exposure to cold or wet, which might give a sudden check to perspiration, is to be cautiously guarded against.

OF VOMITING.

This affection is more frequently symptomatic than primary. It may, however, proceed from any kind of intemperance, or excess in eating or drinking, overfulness of the stomach, indigestible

or acrimonious food, or from the translation of some morbid matter, such as that of gout, rheumatism, ulcers, &c. from the parts affected to this organ. It may also arise from acrid or superabundant bile regurgitating from the gall bladder into the stomach, and then what is thrown up is bitter to the taste, and of a yellow or green colour.

It may likewise be occasioned by the sudden stoppage of some accustomed evacuation, such as the bleeding piles, menstruation, hemorrhage from the nose, or sweating of the feet. Sometimes it arises from debility in the stomach, or from colic, worms, the passing of a stone or gravel from the kidneys through the ureters, and from poisonous or acrid matters received into the organ. It is also a very common symptom in injuries of the head and brain from external violence, producing contusion or compression. It is likewise the effect of pregnancy, beginning soon after the cessation of mentruation, and continuing for the first three or four months. Persons who are subject to nervous affections are now and then seized with a severe fit of vomiting; and it is occasionally excited by violent passions, or by the idea of nauseous or disagreeable objects, especially of such things as have formerly produced vomiting.

Treatment and Regimen.—In the case of a vomiting, which has been occasioned by indigestion or foulness of the stomach, this should be obviated by a mild emetic of ipecacuanha worked off with a proper quantity of chamomile tea. See the Class of Emetics, P. 1.

When it proceeds from acidities in the stomach, it will most likely be relieved by giving about half a drachm of magnesia in a little peppermint water twice or thrice a day, so as to open the bowels gently, and carry off the offending matter by stool.

If vomiting is owing to a weakness in the stomach, bitters and other tonic medicines will be of service; for various forms of which see the Class of Tonics. The compound tincture of bark, to the extent of a tea-spoonful, may also be taken twice or thrice a day in a glass of wine or water, with from fifteen to twenty drops of the diluted sulphuric acid.

When the retrocession of gout or rheumatism, or the obstruction of some accustomed evacuation, has occasioned a vomiting, our best endeavours should be exerted to bring back the disease in the first instance to the part originally affected, and in the latter to restore the discharge which has been snppressed; or if that cannot be done, to supply its place by some other, such as bleeding, purging, bathing the extremities in warm water, perpetual blisters, opening issues, or inserting a seton.

Pregnant women are very apt to be much annoyed by vomiting immediately after getting out of bed in the morning, owing partly to emptiness and a sympathy of the parts, and partly to a change of posture; and the vomiting in this way continues usually during the first three or four months of pregnancy, producing great emaciation and debility. The best means to adopt will be to keep the bowels gently open by some mild laxative, and if the woman is

of a full habit, to draw off some blood from the arm at an early period. The vomiting may, perhaps, be assuaged, if not wholly prevented, by such women taking their breakfast in bed, and this should consist of some light article, as a cup of coffee, tea, &c. They should never eat much at once, nor ever allow their stomach to be perfectly empty. With their food they may drink water, or wine and water; but should these be rejected, a little brandy, properly diluted, may be substituted. If the spirits are depressed, a few drops of the compound tincture of lavender may be taken in a table-spoonful of cinnamon water or camphor mixture.

If a vomiting has arisen from any affection of the mind, the patient should be kept as easy, quiet, and tranquil as possible; be soothed and comforted; and occasionally take a little of the medicine last mentioned, adding, if necessary, a few drops of the tincture of opium.

When spasmodic affections of the stomach give rise to a vomiting, as in the case of hysterics and such other diseases, æther, castor, musk, &c. (see the Class of Antispasmodics, P. 1, 3, 4, 7, or 8), may be taken internally, whilst at the same time the region of this organ may be rubbed externally with an embrocation consisting of equal parts of camphorated spirit, æther, and tincture of opium. If these are not at hand, brandy, or any other spirit, with a small addition of hartshorn, may be substituted.

Where vomiting becomes excessive in any case, it may probably be stopped by taking the saline medicine in an effervescing state. This is prepared by dissolving about half a drachm of the subcarbonate of potash with a little white sugar in an ounce of mint water, and the same quantity of cinnamon water, then stirring them well, and adding about an ounce of fresh lemon juice to the whole, taking care that the patient swallows it during the state of effervescence, and that the draught is repeated every two or three hours. If the vomiting is severe and not restrained by this medicine, five or six drops of the tincture of opium may be added to each dose. An anodyne plaster may likewise be applied externally over the region of the stomach.

Vomiting is sometimes an attendant on a diseased state of the stomach, such as either ulceration of its inner coat, or a scirrhosity of the lower orifice, termed pylorus. In such cases, two grains of the extract of hemlock, with the like quantity of the extract of poppies, and half a grain of opium, taken morning and night with linseed tea and lime water, may afford some relief.

A vomiting which has been stopped, will frequently be reproduced by the least motion; the patient should therefore remain for some time in a state of perfect quietude. Nothing hard of digestion should be taken as food, nor any thing likely to disagree with the stomach.

In the severe affection of sea-sickness, remaining quiet, motionless, and upon deck exposed freely to the air, usually afford the greatest comfort the person is capable of attaining; although various

means of relief have obtained a degree of credit under this condition of the stomach. Spirits diluted with water, or taking a little wine frequently, will now and then succeed in arresting the vomiting; and it has been known to be checked by eating two or three fresh apples. It also appears that any strong impression made upon the mind, such for instance as an alarm of fire breaking out on board, or danger of the ship being wrecked, &c. by exerting a powerful influence on the brain, is capable at once of arresting the progress of the complaint. As a preventive, forty drops of tincture of opium in half an ounce of spirituous tincture of cinnamon may prove efficacious, the person remaining on deck exposed to the air.

OF A LOOSENESS, OR DIARRHÆA.

Diarrhæa is a too frequent discharge of the contents of the intestines or excrementitious matter, accompanied by gripings, but seldom attended by febrile symptoms, and never by contagion. It is not always to be considered as a disease, but sometimes rather as a salutary evacuation brought about by nature to carry off some morbid or acrid matter which might have disordered the body.

Symptoms.—Each motion in diarrhæa is usually preceded by flatulency and a murmuring noise in the bowels, together with a sense of uneasiness and weight at the lower part of the belly. The stools are frequent and of various colours and quality: sometimes they consist of the natural excrement in a liquid state, at other times they are green or slimy, and occasionally they are very dark and fetid. There is now and then some degree of nausea or sickness as well as griping, and the patient feels a considerable sense of coldness, especially of the legs and feet; his countenance becomes pale, and the skin is dry. When the disease goes on for any length of time, it occasions great loss of strength, and considerable emaciation of the whole body. Diarrhæa is very apt to arise in the last stage of pulmonary consumption, from an absorption of the purulent matter into the constitution, and greatly to add to the prevailing debility. When the food passes through the bowels in an undigested state, the disease is termed Lientery.

Causes.—The morbid increased action of the intestines in a diarrhæa is occasioned by various causes, acting either on the parts affected solely, or applied to the body in general. Among the former we may consider matters received into the stomach, which, from their nature, undergo fermentation or otherwise disagree, such as acid fruits, oily or putrid substances, &c.; 2dly, matters generated in the body and thrown into the intestines, as acrid bile, purulent matter, water in dropsy, worms, &c.; 3dly, mucous matter poured from the glands of the intestines themselves in consequence of an increased excretion. Among the latter causes of the disease may be mentioned suppressed perspiration by the application of cold to the surface of the body, but more particularly the feet, thereby determining the circulation of blood to the inte-

rior parts, as likewise by passions of the mind, &c. In children, diarrhæa is a frequent attendant on dentition and worms.

As long as the strength of the patient is but little impaired by the discharges, the disease may be considered rather as a salutary than a morbid evacuation, and is, therefore, unattended with danger; but if neglected or mismanaged, it is apt to continue for a length of time, thereby producing exhaustion of strength, great emaciation, and a dropsical tendency.

A diarrhæa may readily be distinguished from dysentery by the tenesmus, evacuation of blood and purulent mucus, and of small hardened balls instead of excrementitious matter, which prevail in the latter.

Treatment and Regimen.—To treat the disease with judgment, we should endeavour to find out the cause from which it has originated, and to obviate this. If it has proceeded from any excess or repletion, it will be necessary to begin with an emetic (see this Class), which may be taken in the evening; and on the succeeding morning, an aperient (see the Class of Laxatives, P. 2 or 12), which may be repeated once or twice, if the looseness continues. During this time, the patient should avoid animal food, and confine his diet to vegetable productions, such as sago, arrow root, rice, bread pudding, &c. drinking barley water or thin gruel for ordinary beverage.

When a looseness has been occasioned by an exposure to cold and obstructed perspiration in consequence thereof, this should be restored by frequent small doses of some antimonial preparation, (see the Class of Diaphoretics, P. 1, 4, 6, or 7,) the patient keeping himself warm, swathing his belly with flannel, and drinking freely of tepid diluting liquors, such as those before mentioned. At night he may immerse his feet in warm water, or he may go into a warm bath, if it can be readily obtained. On the succeeding morning, a few grains of rhubarb with a little magnesia will be appropriate medicines. If the disease is accompanied by febrile heat, and this is not carried off or considerably abated by the means that have been pointed out, it will be advisable to draw off a few ounces of blood from the arm.

Should diarrhæa have arisen from an obstruction of some accustomed evacuation, every method should be taken to procure the discharge which has been suppressed, as not only the cure of the disease but the life of the person may depend upon this. If we do not succeed, other evacuations must be substituted; but it will be advisable first of all to try the effect of bleeding.

If the disease has been occasioned by any poisonous or acrid substance taken into the stomach, diluting liquors, such as barley water, thin gruel, and fat animal broths, should be drank copiously and frequently, so as to remove as much of the offending matter as possible by vomiting; after which a dose of castor oil may be taken to carry the remainder downwards, at the same time that it sheathes the coats of the intestines against the acrimony of the exciting cause.

When occasioned by worms, which may frequently be ascertained by the sliminess of the stools, and their containing pieces of the decayed animals, medicines must be given to destroy and dislodge them. See Worms.

If a looseness proceeds from drinking impure or bad water, it ought if possible to be changed; but where this cannot be done, it may probably be corrected by the addition of a small quantity of chalk, quick lime, or the like.

Should rheumatism or gout be translated from the extremities and fall on the intestines, thereby occasioning a diarrhæa, the morbid matter ought to be solicited to its proper place by warm fomentations and stimulant cataplasms to the feet, and perspiration be promoted by warm diluting liquors, such as wine whey, with a few drops of spirits of hartshorn or of the tincture of opium added to it. If these means fail in stopping the looseness, the patient may take about six drachms of the compound tincture of rhubarb, and afterwards, if necessary, some absorbent medicine. See this Class, P. 3 or 4.

When a diarrhæa proceeds from acidity prevailing in the stomach and intestines, and marked by frequent eructations of air, griping pains in the bowels, with frequent stools of a chalky appearance which occasion a smarting sensation in the fundament each time they are passed, it will be necessary to administer medicines that will correct this tendency, for which purpose the patient may take the absorbent medicines before recommended. If these are not found to answer, he may make trial of about ten grains of the subcarbonate of potash twice or thrice a day, dissolved in a little chicken or mutton broth, and at night he should have an opiate. See the Class of Anodynes, P. 5.

When diarrhæa attacks women in child-bed, and continues for two or three days, it should be considered as rather alarming, and ought to be stopped by giving the woman some proper medicine (See the Class of Absorbents, P. 5,) three or four times a day, with about five drops of tincture of opium added to each dose; and a clyster composed of a thin solution of starch, with thirty or forty drops of the before-mentioned tincture, may also be administered morning and night.

Children are very liable to a looseness, especially while they are cutting their teeth; and this so far from being injurious, is found to enable them to go through the different stages of dentition with safety and greater ease. Such a looseness ought therefore never to be stopped. If it runs however to excess, and the stools prove sour or griping, four or five grains of rhubarb, combined with ten or twelve grains of magnesia or prepared chalk, may be given morning and evening with the view of correcting the acidity, carrying off the griping stools, and somewhat restraining the increased action in the intestines.

The diarrhæa which is induced by violent passions or agitations of the mind, should be treated by administering antispasmodics

(see this Class, P. 1, 2, or 5,) and opium. The latter may be either conjoined with the former or be used by itself. If in the latter way, from twenty to thirty drops of its tincture may be given every six hours in a little cinnamon or peppermint water, till the looseness stops, after which stomachic bitters, with the bark, (see the Class of Tonics, P. 7, 8, 9, 10, or 11,) may be employed, and these be persevered in for a proper time. It will likewise be of great importance that tranquillity of mind is observed as much as possible.

Whenever a diarrhæa takes place, and is likely to prove critical, as in the case of fever and some other diseases, it should not be rashly stopped; but when this is not to be expected, and the looseness resists the power of absorbents, it will then be necessary to substitute astringents (See this Class, P. 6, 7, or 8,) joined with opium. The patient's diet, at the same time, should consist of rice, milk, and puddings, combined with cinnamon and nutmeg, of arrow root, sago with Port wine, jellies, good nourishing broths, the lighter sorts of meats, &c. avoiding crude vegetables and food of a flatulent nature, as also fermented liquors, such as beer, ale, cider, &c., substituting generous wine, or weak brandy and water as cordials. If the looseness is not restrained by these means, a clyster of about ten ounces of a thin solution of starch, with forty drops of the tincture of opium, may be administered night and morning, in addition to them. The patient may also take half a pint a day of lime-water, mixed with an equal quantity of milk.

To give tone and strengthen the whole body, as well as the parts more immediately weakened by a diarrhæa of protracted nature, it will be useful to employ tonics, such as calumba, cascarilla, simarouba, &c. together with preparations of iron and chalybeate waters. See the Class of Tonics for various forms of these remedies.

Persons who are subject to frequent returns of a looseness, should lead a temperate life, and abstain from all unwholesome food, meats of difficult digestion, and crude summer fruits. They should also carefully guard against wet feet, or any exposure to cold that might obstruct perspiration and determine the circulation to the intestines, wearing flannel next to the skin. All agitating passions are likewise carefully to be guarded against.

DISEASES OF THE KIDNEYS AND BLADDER.

OF AN IMMODERATE FLOW OF URINE, OR DIABETES.

Symptoms.—In diabetes there is a frequent discharge of urine, sometimes insipid, and at others containing a large portion of matter of a sweetish taste and an agreeable smell, voided in a quantity far exceeding that of the fluid, or aliment received into

the stomach. The patient has great and continual thirst, with generally a voracious appetite, his skin is dry and harsh, the strength fails, gradual emaciation of the whole body takes place, swellings of the lower extremities ensue, and there is a fever of the hetic kind.

Causes.—Preceding diseases, such as the hypochondriac, dyspepsia or indigestion, asthma, fluxes, fevers, constitutional weakness, and the decline of life, may be considered as the causes which predispose to diabetes; whereas a crude vapid diet, an abuse of spirituous liquors, immoderate evacuations, excess in venery, the application of cold to the body, great fatigue, a use of strong diuretic and stimulating medicines, such as the spirits of turpentine and tincture of cantharides, too great a laxity of the organs which secrete the urine, and every thing that induces debility of the system, may be regarded as the exciting causes of the disease. An impaired action, or morbid change in the natural powers of digestion and assimilation, has been considered by some physicians as its immediate cause.

Diabetes may frequently be cured, if properly attended to at its commencement; but the cure is always attended with great difficulty and no inconsiderable degree of uncertainty if the disease has been of long standing, particularly in persons who are either far advanced in life, or whose constitutions have been impaired by excessive drinking, or indeed any other debilitating cause whatever.

A considerable diminution of thirst, the appetite becoming more natural, the skin perspirable and soft to the touch, the bowels regular and rather lax, the dyspeptic affection much diminished, the bodily strength somewhat recruited, and the urine being voided less frequently and in smaller quantity each successive day, being at the same time of a more natural smell, colour, and taste, are to be looked upon as very favourable appearances, and denote the recovery of the patient; but the contrary of all these indicate that sooner or later the termination will be fatal.

Treatment and Regimen.—As the success of the treatment will, in a great measure, depend on the diet of the patient, it seems proper to begin with this. He should carefully abstain from every kind of food which is of a hot stimulating nature, and live chiefly, if not wholly, on light animal substances, abstaining rigidly from every kind of vegetable matter. His drink may be the Bristol, Hot-well, Clifton, or other chalybeate waters; but if these cannot be obtained, lime water, mixed with an equal proportion of milk, in which a little gum acacia has been dissolved, should be substituted. Soda water is a medicine well calculated to counteract any acidity in the stomach, and therefore may be given occasionally if the patient dislikes lime water. He should take daily moderate exercise, particularly on horseback; but this should be so gentle as that no fatigue shall arise from it. Every thing that promotes perspiration may be of service; and with this intent, the body should

be kept warm by wearing flannel next the skin, a flesh brush may be employed several times a day over the kidneys, and occasionally a warm bath be used at night. The air which the patient breathes should be pure and dry; and therefore a situation in which he can enjoy such will be entitled to a preference. He should sleep on a mattress and not on a feather bed, a soft one being supposed to be of an injurious nature.

It may be advisable to begin the cure by evacuating the stomach of any crude contents by an emetic of a gentle nature (see this Class, P. 1 or 2), and occasionally to repeat it in the further course of the disease.

The state of the bowels is next to be attended to, and these are to be opened, if necessary, by some mild aperient, such as rhubarb conjoined with a little magnesia, or with pills of aloes and soap. See the Class of Laxatives, P. 7.

With the view of diminishing the increased flow of urine by increasing a discharge elsewhere, such as by perspiration, we may, in addition to warm clothing and the occasional use of a warm bath, make trial of diaphoretic medicines, as the compound powder of ipecacuanha, in doses of five or six grains, repeated every four or six hours, or of antimony joined with opium, in the following form: Take one ounce of cinnamon water, twelve drops of the solution of tartarized antimony, and fifteen drops of tincture of opium, mix them, and give this draught every six hours. With the like view, a blister may be applied over each kidney in succession, keeping it in a discharging state by dressing the ulcerated part daily with the ointment of Spanish flies.

To restore the tone of the parts which are supposed to be the seat of the disease, it will next be advisable to employ corroborants and astringents. Those of the first class most generally used are the Peruvian bark, sulphate of quinine, cascarilla, myrrh, and chalybeates, (see the Class of Tonics, P. 8, 10, 19, 20, and 27,) together with cold bathing when the season of the year will admit of it. Great success has arisen in the treatment of some cases of diabetes, from a combination of Peruvian bark, the red-berried Arbutus leaves, and opium conjoined, in the proportion of twenty grains of each of the former to half a grain of the latter, when taken three times a day, the patient using at the same time lime water for the administration of the medicines as well as for ordinary drink. The astringents most to be relied upon are alum and the sulphate of zinc: these may either be administered separately, (the former in the dose of half a drachm four times a day, or the latter in the quantity of two grains, made into a pill with a little confection of roses, and repeated three or four times a day,) or we may give the two medicines combined together with a small addition of opium, as this has been found to be capable of exerting considerable influence over the morbid secretion of the kidneys in this disorder. Fifteen grains of alum, with two grains of sulphate of zinc, and half a grain of opium, formed into a bolus with a little of the

confection of roses, may be taken four times each day, washing it down with either soda water, or that of lime mixed with milk and gum acacia, as before mentioned.

Besides soda water, other alkaline medicines, such as the sulphuret of potash, hepatized ammonia, and the subcarbonate of ammonia, have now and then been employed with benefit in some cases of diabetes, and may therefore be given under a failure of the other remedies. The first may be taken to the extent of ten grains made into a bolus, and be repeated three times a day; the last in the dose of four grains, made into two pills, with a little confection of roses, taken thrice a day. The hepatized ammonia is to be given in the dose of three or four drops, in a little distilled water, three or four times a day at first, gradually increasing their number until they produce a slight giddiness. Magnesia, in drachm doses, repeated twice a day, appears to have been given in some cases of diabetes with considerable advantage. That prepared by Dr. Henry deserves the preference.

Such are the remedies which, conjoined to a diet consisting chiefly of animal food, have been found by experienced physicians to have proved the most effectual in the treatment of diabetes. After the cessation of this disorder, great attention should be paid to the state of the stomach and bowels, as the tone of the former is apt to remain much impaired for some time, and the latter are in general inactive and liable to inflammation if evacuations be not promptly obtained. To assist the stomach in duly performing its office of digestion, it will therefore be advisable for the patient to enter on a course of stomachic bitters, (See the Class of Tonics, P. 7, 8, 10, and 11,) and to keep the body moderately open by laxative medicines when required. Should the patient feel any pain or uneasiness in the region of the kidneys, a large strengthening plaster may be applied to the back.

OF AN INCONTINENCE OF URINE.

In this disease there is an involuntary evacuation of urine, from an inability to retain it, owing to various causes which give rise to a weakness or paralytic condition of the sphincter muscle of the bladder. Sometimes it arises from calculous concretions irritating the neck of the bladder, or from injury done to the parts in the operation of cutting for the stone; from pressure of the womb during a pregnant state, and now and then from injury done to the bladder during labour. Too frequent a use of spirituous liquors, excess in venery, and the practice of onanism, are frequently the exciting causes of an incontinence of urine.

Treatment.—When the disease is owing to a calculous concretion lodged in the bladder, the only way of effecting a cure is to remove this by the proper operation. If arising as a consequence of pregnancy, it can only be obviated by delivery, although it may,

probably be somewhat palliated by confining the woman principally to an horizontal posture.

If it has been occasioned by a relaxation in the parts, the cure must be conducted on the principle of strengthening these by a frequent use of cold bathing applied immediately to them, as also generally to the whole body, and by a use of chalybeates and other tonics. (See this Class, P. 8, 10, 19, 20, and 21.) By way of stimulus, a blister may be put to the perinæum, or that part of the body which is situated between the organs of generation and fundament. Should the disease be owing to a paralytic affection of the sphincter muscle of the bladder, electricity may be of some service, as may also medicines of a stimulating nature, such as the tincture of Spanish fly or cantharides. Of this, about fifteen drops may be taken three or four times a day in any vehicle. These means may possibly be assisted by pressure applied externally in the perinæum or part situated between the organs of generation and fundament on a parallel line with the urethra. A bandage might be contrived to answer this purpose.

To prevent the urine from excoriating and galling the neighbouring parts in cases of incontinence, it will be necessary for women to wear a large piece of sponge so secured as to absorb the urine when it drops, taking care to wash it out frequently in warm water, to prevent its acquiring an unpleasant uriniferous smell. Men should wear a bladder, or a bottle of Indian rubber, applied in such a manner as to receive the urine, and thereby prevent its excoriating the neighbouring parts.

OF A DIFFICULTY AND SUPPRESSION OF URINE.

A frequent desire of making water, attended with great difficulty of voiding it, is known by the name of a strangury or dysury: but when the discharge of urine, although duly secreted, is totally suppressed, it is called ischury by professional men. A retention of urine implies a defect or want of the ordinary secretion of this fluid. It is of great consequence to distinguish between these two last complaints, as by confounding them together much injury might be done to the patient.

Causes.—Both these complaints are occasioned by a variety of causes, viz. a lodgment of feculent matter in the gut near the fundament, spasm at the neck of the bladder, strictures in the urethra, enlargement of the hemorrhoidal veins, inflammation at the neck of the bladder, an enlargement and diseased state of the prostate gland, particles of gravel or a stone blocking up the passage through which the urine naturally passes, pregnancy, a translation of gout, excess in drinking spirituous or vinous liquors, a diseased action of the muscles that expel the urine from the bladder, the absorption of cantharides applied externally, or taken internally, and the application of cold or wet to the feet.

Very little danger attends on a dysury unless by neglect, and its being suffered to terminate in a total obstruction or suppression; but an ischury is always to be considered as dangerous if it continues for any length of time; for inflammation of the bladder is apt to ensue from its being greatly distended by the quantity of urine retained in it. In those cases which will not admit of the introduction of a catheter to draw it off, the only chance left to the patient is to submit to the proper operation; but even this is attended by great hazard, particularly when not performed in due time.

Treatment and Regimen.—When a dysury or strangury prevails, little more will be required than to make the patient drink plentifully of diluting mucilaginous liquors, such as barley water with a little gum acacia dissolved in it, linseed tea, or a decoction of marsh-mallows; to apply woollen cloths wrung out in hot water, or a large bladder filled therewith to the bottom of the belly; and to administer an emollient clyster frequently. The latter will not only act as a fomentation internally, but may likewise melt down and bring away any feculent matter that has collected at the lower end of the intestinal tube, and which, by its pressure against the neck of the bladder not only gives rise to the difficulty of voiding urine, but likewise proves a stimulus. If the clysters do not procure stools, it will be advisable to give about an ounce of castor oil by the mouth.

In all cases of suppressed urine, it will be necessary to apply to a skilful surgeon for assistance in due time, lest, by an improper delay, the bladder be distended beyond what it is capable of bearing, and either become highly inflamed, or be ruptured. In the introduction of the catheter, a preference should be given to one of elastic gum, and not a metal one; and no force ought to be used in passing it through the urethra into the bladder, as by using violence, an artificial passage, in consequence of a laceration of the membranous parts, might be the consequence. If the catheter will not pass readily, it should be withdrawn for the present, and other means resorted to.

To guard against the effects of inflammation, it will be advisable to open a vein in the arm, and draw off twelve or sixteen ounces of blood, if the person is an adult; and if on becoming cool this throws up a sizy or buffy coat on its surface, the operation ought to be repeated the same day, and nearly to the same extent. With the like intention it will be proper to evacuate the contents of the intestines by some mild aperient, such as castor oil, or a solution of the sulphate of magnesia, (see the Class of Laxatives, P. 11,) assisting its operation by an emollient clyster. See the Class of Emollients, P. 3.

If the suppression of urine does not give way to these means, assisted by fomentations over the region of the bladder, the patient ought to be put into a warm hip bath for ten minutes or a quarter of an hour. If he becomes a little faint, the surgeon may at the time make another trial to pass the catheter whilst the

the patient is in the bath ; and to render this the more easy, an oval or long tub should have the preference for bathing him in. If a surgeon is not at hand, and the person is provided with a flexible hollow bougie or gum catheter, he may attempt the introduction of it himself, taking care to use no force in passing it.

In every instance of suppressed urine, whether occasioned by spasm, stricture, or gravel, opium is a valuable medicine ; and should therefore not only be given by the mouth, but likewise in clysters repeated frequently. Thirty drops of the tincture may be given for a dose in an ounce of barley water or camphor mixture, conjoined with a solution of gum acacia, and this be repeated once or twice in the course of twenty-four hours. From thirty to forty drops of the tincture in ten or twelve ounces of thin gruel for a clyster may also be administered three times in the same space if the suppression continues.

Throwing cold water on the thighs, or making the patient stand on a cold stone floor, has been known to remove a suppression of urine when other remedies have failed.

If an ischury has been occasioned by a piece of gravel, or small stone sticking in the urethra, injecting a little warm milk and sweet oil frequently into this canal will sometimes afford relief.

Persons labouring under the disease should take food that is light, and in small quantities. Their drink may be dococtions and infusions of mucilaginous vegetables, as marsh-mallows, barley water, or a solution of gum acacia in warm milk. Occasionally about a tea-spoonful of the spirit of nitric æther may be put into the patient's drink.

Those who are subject to attacks of either a difficulty in voiding urine or a suppression of it, should carefully guard against all exposures to cold, particularly getting wet feet ; they should lead a life of the strictest temperance, avoid all severe exercise on horseback, and carefully remove costiveness as often as it occurs. Those who are afflicted with gravel or gout, should abstain from acids and austere wines ; and those who have strictures in the urethra will act prudently by passing a bougie now and then, and keeping it in for half an hour or so each time.

Persons labouring under an enlargement of the prostrate gland are very apt to be attacked by a difficulty of making water, and occasionally it becomes suppressed. Under paroxysms of the disease there is a frequent desire of voiding urine accompanied by a severe pain previous to the flowing of any ; and when it is passed has a very peculiar and unpleasant smell. On becoming cold it deposits a gelatinous or muco-purulent sediment at the bottom of the chamber utensil.

The means to be adopted during the first stage of the disease, are frequent topical bleedings by means of several leeches applied to the perinæum (the space between the organs of generation and fundament) from time to time ; cooling laxative medicines, parti-

cularly castor oil, taken as the occasion or state of the bowels may require, and the daily use of a warm hip bath of about 97 degrees of temperature; whilst, at the same time, quietness, temperance, and all other means for allaying irritation, are to be strictly observed. With the same view, about fifteen or twenty drops of the tincture of opium mixed in one ounce and a half of camphor mixture may be administered every night and morning when the patient is suffering under pain or dysury.

The urine is at the same time to be kept in a diluted state by means of mucilaginous drinks, such as barley water, having a small quantity of gum acacia dissolved therein, and being mixed with a little milk, or by linseed tea. All straining to make water ought to be carefully avoided where dysury accompanies an enlarged state of the prostate gland; and an elastic gum catheter, without the stilet, be introduced every six or eight hours for the purpose of emptying the bladder. This being done, about half a pint of tepid or luke-warm water may be injected into it morning and night, through the catheter, by means of an elastic gum bottle or common syringe of a large size. An occasional clyster or lavement of thin gruel may, probably, afford some relief, particularly if assisted by introducing up the fundament a suppository, consisting of two grains of opium and four of the extract of henbane. As an internal medicine, the extract of hemlock may be made a trial of in the quantity of four grains, formed into a pill, which may be taken morning and night, increasing the dose after a time if no relief is experienced.

Where either dysury or ischury arises in consequence of pregnancy, the pressure may be removed occasionally by elevating the womb: inflammatory affections must be prevented from coming on, the body kept open and cool, and the woman be placed as much in a recumbent posture as she can easily bear, until nature removes the cause. By bleeding her once or twice some relief may possibly be obtained.

OF THE GRAVEL AND STONE.

When coarse sand, or very small calculous concretions are formed in the kidneys, and by lodging there or passing from thence along with the urine through the ureters, (tubes which convey it to the bladder) and exciting a considerable degree of pain in the loins, they constitute what is called a fit of the gravel. Should one of these concretions remain in the kidneys or bladder for some time and not be voided, it then accumulates fresh matter in layers, and at last becomes of too considerable a size to pass off, in which case the person is said to labour under a stone.

Symptoms.—In a fit of the gravel there is usually a fixed pain in the loins, numbness of the thigh on the side where the kidney affected is situated, nausea, vomiting, and not unfrequently great difficulty of voiding urine, if not a total suppression. The gravel, or

calculous concretion, in descending into the ureter, often produces a very acute pain extending down towards the bladder, the thigh and leg of the side affected are benumbed, the testicles are retracted, and occasionally there are faintings and even convulsions. From the continued irritation of the kidney when a calculous concretion is lodged there, the urine puts on a very dark appearance, as if it were mixed with coffee grounds, evidently depending upon particles of blood broken down. This appearance, in conjunction with a dull heavy pain in the loins, is nearly an infallible proof of the existence of a stone in the kidney.

When a stone is lodged in the bladder, the patient has a frequent desire to make water; but this comes away in a small quantity, is voided towards the conclusion with pain at the end of the penis, and is often suddenly stopped. He cannot bear any kind of rough motion either on horseback or in a carriage without suffering great torture, and perhaps producing a discharge of bloody urine or some degree of suppression. There is not unfrequently a considerable itching about the fundament, with an uneasy and repeated inclination to go to stool. There is often a numbness in one or both thighs, together with nausea and vomiting, and sometimes there is a retraction of one of the testicles. The patient can generally pass his urine with greater facility in an erect posture; for the most part it deposits a copious, thick, and mucous sediment, and there is invariably a sharp pain in voiding the last drops, which produces a kind of convulsive motion.

Causes.—The gravel and stone appear to arise from a peculiar disposition of the fluids, and particularly the secretion of the kidneys, to form calculous concretions, owing, it has been supposed, to the presence of an acid principle in them, which has by physicians been named uric acid. They are occasioned by a constant use of water which is impregnated with earthy particles, known under the name of hard water, by too free a use of sour astringent wines and fermented liquors, by extraneous bodies getting into the bladder, by impaired digestion, and by an hereditary predisposition. Persons who are advanced in life, or who have been much afflicted with gout or rheumatism, are very subject to gravel and stone. From the difference in the structure of the urinary canal in the sexes, men are much more liable to these complaints than women. It is a fact well established that the period of life from infancy to twelve or fifteen years, is that which is most of all subject to the formation of calculous concretions in the bladder, and that the offspring of the poor are more afflicted with them than those of persons in a superior condition in life. The stone is a rare disease among the inhabitants of warm climates, as any particles of small gravel or sand which may have been deposited from the urine, usually are voided before they arrive at a considerable size.

The only disease which can be confounded with a stone in the bladder, is a disordered state of the prostate gland which is situat-

ed near its neck; but the two complaints may readily be distinguished from each other. In affections of the prostate gland, the patient will always experience pain and difficulty at the commencement of his attempting to make water; whilst in cases of a stone in the bladder, it is usually during the passing off of the urine, or towards the close of its flowing, that pains and any obstruction are felt.

The stone is always to be considered as a dangerous disease, as when it acquires too great a bulk to pass from the bladder through the urethra or urinary canal, nothing can remove it but an operation.

Treatment and Regimen.—In all cases of gravel and stone lodged either in the kidneys or bladder, where the fit is violent, it will be advisable to take away a proper quantity of blood from the arm, lest inflammation should be induced by the stimulus of the stony matter. This step being taken, if necessary, the parts affected should be well fomented with flannel cloths, wrung out in a decoction of chamomile flowers and bruised poppy heads, or in common hot water when these are not at hand. The patient is, at the same time, to drink plentifully of mucilaginous liquors, such as linseed tea, barley water with gum acacia dissolved in it, or a decoction of marsh-mallows. If his bowels are at all confined, it will be proper to give him some aperient medicine, and none will be so appropriate as castor oil, an ounce of which may be taken for a dose.

To assist the effect of this medicine, as well as to alleviate the severity of the pain, it will be advisable to administer an emollient clyster from time to time, such as about eleven ounces of thin gruel, or an infusion of senna, with half an ounce of sulphate of soda, one ounce of castor or sweet oil, and forty drops of the tincture of opium. After the bowels are sufficiently operated upon and stools freely procured, we may venture to give an opiate by the mouth, particularly if the patient is in much pain. A draught, consisting of fifteen drops of the tincture of opium in a little barley water, or a pill of half a grain of opium and four of soap, may be given every four or six hours, as long as the pain continues severe. Under such a circumstance, it will also be proper to put the patient into a warm bath for ten minutes or a quarter of an hour, which process may be repeated again after a lapse of some hours. Opium, by being administered freely by the mouth as well as in clysters, not only abates the pain, but by also relaxing the spasmodic affection of the fibres of the parts immediately concerned, greatly tends to open the passage so as to admit of a discharge of the urine, and facilitate the voiding of the gravel or stone.

Vomiting is a frequent attendant on a fit of gravel or stone in the kidney, and when only moderate, need not be discouraged, as the expulsion thereof is sometimes promoted thereby; but when it is so severe as to require attention, a little warm chamomile tea should be taken to evacuate the stomach of its contents, after

which, saline draughts in a state of effervescence, with the addition of fifteen drops of the tincture of opium, may be of great service.

These are the means to be adopted during a fit (as it is termed) of either gravel or stone. In the intervals, such remedies as are most congenial to the nature of the concretions (for some are most soluble in alkalies and others in acids), must be adopted ; and it will therefore be advisable that the nature of the gravel be ascertained, which knowledge is to obtained by attentively examining the deposit that takes place in the urine on remaining any time in the chamber utensil, or any particles or fragments which are cast off.

Different species of stone or calculi have been described by able chemists who have taken the trouble to analyze their constituent particles, viz. the uric acid calculus (distinguished by its red or dark yellow colour, and generally rough surface, although sometimes smooth) ; the fusible calculus ; the mulberry calculus (known by the protuberances and irregularities of its surface, its weight, compactness, and dark colour), and the bone earth calculus.

When it is ascertained that there is a stone in the bladder, and that it has acquired too great a size for passing through the urethra in males, no time should be lost in having it cut out, provided the patient's constitution is good, and that he is not of an advanced age, before the habit has been rendered too irritable, or the stone has become so large that it cannot be extracted without lacerating the parts through which it has to pass.

In females, stones of a moderate size have been extracted from the bladder, by gradually distending the urethra by means of a bougie, or the proper dilating instrument, taking care to increase its magnitude every other day or so, until the canal has become sufficiently distended to admit of the introduction of a pair of extracting forceps through it into the bladder. This is a very great advantage in favour of females, as it may be embraced as soon as even a small stone is discovered in the bladder.

It has been recommended in cases of stone in the bladder, to inject a solvent solution into this two or three times a day by means of a catheter with a bottle of elastic gum affixed thereto, and I believe the experiment has been tried ; but all the attempts to dissolve a calculus of any size, either in this manner or by medicines administered by the mouth, have hitherto failed, although they may most probably prevent its becoming larger. When persons labouring under a stone will not submit to an operation, or none is to be found on examination, although existing symptoms denote the existence of one, or that much sand or small particles of gravel are found in the urine on standing any time in the chamber pot, it then will be advisable to administer such medicines as are appropriate to the nature of the sand or concretions.

Most stones or calculi originate in the kidneys, and by far the greater number consist of what has been named by chemists uric acid. Alkalies have been found the most appropriate medicines

in this species of stone, from the power which they possess of diminishing the secretion of this acid, and thereby preventing the enlargement of the calculus, so that if of a very small size, it may possibly pass off through the urethra.

The solution of potash (liquor potassæ) is a powerful alkali, and may be taken in doses of twenty drops twice or thrice a day, in some gelatinous or mucilaginous liquor, as veal broth, linseed tea, a solution of gum acacia in milk, or a decoction of marshmallows. This medicine is, however, of a very acrid nature, and its use ought not to be long persevered in. After a short time, we may substitute magnesia in the dose of a drachm morning and night; for it has been satisfactorily ascertained that this medicine possesses the power of obviating the tendency in the constitution to form uric acid, and of correcting those stomach complaints connected with the formation of gravel and stone.

Besides these remedies, other alkaline medicines have been recommended, such as soap pills, washed down with lime water diluted with an equal quantity of milk; the aerated potash in the dose of two drachms, dissolved in a pint of distilled water, twice a day; and the alkaline aerated water, in the quantity of about a gill, three times a day. This is a mild preparation, and has been greatly extolled for its efficacy in calculous and nephritic complaints, and is indeed now generally substituted instead of more active alkaline medicines. Should it occasion flatulency, or prove very cold to the stomach, a tea-spoonful of brandy may be added at the times of taking it. If there is much irritation in the urinary passages, it may probably be of service to add ten or twelve drops of the tincture of opium to each dose, discontinuing the latter as soon as the pain subsides.

Where the patient is afflicted with either the fusible or bone earth calculus, and this is satisfactorily ascertained by an examination of the deposit made by the urine on remaining in the chamber pot for a sufficient time, the most proper medicine will be the diluted muriatic acid. This may be given in doses of twenty drops, gradually increased to thirty, three or four times a day, sufficiently weakened with water, or an infusion of orange peel. The constant and uniform effect of this remedy, after a few doses, is the appearance of a considerable quantity of sandy or gravelly sediment in the urine.

Stones of the mulberry nature are very difficult of solution even out of the body, and alkalies have no solvent power over them. If any medicine will produce a good effect to persons labouring under this species of calculous concretion, it may be weak nitric acid. A trial may be made of it in doses of twenty drops three times a day diluted with a sufficient quantity of water.

In calculous and nephritic complaints accompanied by a mixture of purulent matter and mucus in the urine, and which is deposited therefrom in the chamber pot upon cooling, the uva ursi (red berried wortleberry), has been highly celebrated as allaying the

pain and irritability of the kidneys and bladder. From fifteen grains of the powdered dry leaves to half a drachm for a dose, may be given twice a day in such cases with advantage.

Those who are afflicted with gravel or stone should confine their diet to food of a nutritive and light nature, avoiding, however, aliments of either a heating or flatulent nature, salted meats, sour fruits, &c. Their diet ought to consist of such things as tend to promote the secretion of healthy urine, and keep the body open. Asparagus, lettuce, parsley, artichokes, turnips, carrots, radishes, onions, leeks, celery, &c. will be very appropriate articles. For common drink, they may take spring or soft water, as being preferable to pump water, which is of a hard nature as it is termed; milk and water, decoctions of the roots of marsh-mallows or parsley, infusions of linseed, or a solution of gum acacia in milk, mixed with lime water. If they have been accustomed to generous liquors, they may take a little genuine Hollands well diluted with water. They should cautiously abstain from all acid and acescent drinks, such as cider, &c. as we seem authorized in concluding that acids are prejudicial, and give rise to the formation of gravelly and calculous concretions, by causing a separation and crystallization of the uric acid of the urine within the body, and particularly so in persons whose constitutions are disposed to form gravel or stone, as these complaints are in general aggravated by acid and acescent drinks of all kinds, and alleviated by those of an alkaline nature.

This being a fact well established, the alkaline aerated water will be a proper article for drink. Seltzer water has been found beneficial not only in rendering micturation less painful, but in lessening the mucous, sandy, and not unfrequently purulent discharge, which accompanies the flow of urine. An internal use of the Buxton water is said also to relieve painful complaints of the kidneys and bladder, connected with the formation of calculous concretions, and its use in this way has been found much assisted by employing it at the same time as a bath.

Due exercise is a very important point to be attended to by those who are afflicted with the complaints in question. In assisting the passage of gravel from the kidneys to the bladder, gentle exercise, particularly in a carriage or on horseback, has often a very good effect, and it likewise will prove highly serviceable where there is a tendency or predisposition to form sand or gravel; for nothing is more likely to increase the disorder than an indolent or sedentary life under such circumstances. When there is a stone in the bladder, the exercise should only be very moderate, and had best be taken on foot at a very gentle pace, or in a carriage on even roads.

DISEASES ATTENDED WITH LANGUOR, EMACIATION, OR A DEPRAVED HABIT OF BODY.

OF THE ATROPHY.

This disease is also known under the name of nervous consumption, and its characteristic symptoms are a wasting of the body and strength, without either a cough, difficulty of breathing, much fever, and other hectic symptoms; but there is a disinclination to food, with a weak impaired digestion.

Symptoms.—In the beginning of the disease there is a decrease of strength as well as of flesh, a depression of spirits, languor, loss of appetite, and impaired digestion; the face is pale and squalid, and the habit disposed to dropsical swellings; the urine is often small in quantity and high coloured, but there is little or no fever, nor any difficulty of breathing, unless what arises from extreme debility. In some cases, the belly is very prominent, and when pressed upon with the hand, feels hard and knotty, owing to an enlargement of the mesenteric glands from a scrofulous constitution; and these appearances often present themselves in children descended from parents of such a habit.

Causes.—This species of consumption is owing to a poor vapid diet which does not afford a due supply of nourishment, weakness of the digestive powers, too copious evacuations, too free an indulgence in sensual gratifications as well as spirituous liquors, unwholesome air, grief and anxiety of mind, decay of the powers of life from age or previous diseases, worms in the alimentary tube, and an enlargement of the liver, spleen, pancreas, or mesenteric glands. In children, it is not unfrequently produced by a deficiency of food, as in the case of infants sent out to nurse, when perhaps two, if not three infants, hang upon the breast, which was designed by nature only for one.

Atrophy is always to be considered as a dangerous disease.

Treatment and Regimen.—The first consideration in the treatment of this complaint, is to discover the cause from which it has originated, and, if possible, to do this away. If excessive evacuations have induced the disease, such as purgings, the whites, profuse menstruation, &c. these must be restrained by the means advised under these several heads, at the same time that the strength is recruited by a nutritious diet, gentle exercise, a glass or two of some generous wine occasionally, the Peruvian bark, chalybeates, and other strengthening means. See the Class of Tonics for various forms of these medicines. If the disease has been occasioned by continuing to give suck too long, or the nurse proves unequal to the drain of milk made by her tender charge, she must wean the infant, as no medicine will relieve her from the distressing symptoms until she has done this. If by intemperance, or too great an indulgence in sensual gratifications, these must be desisted from, and greater moderation be observed in future.

If from worms, these must be dislodged from the alimentary tube by the medicines recommended in the Class of Anthelmintics. If a venereal taint is the cause (which is not unfrequently the case by the virus circulating in the mass of fluids without exciting suspicion), a gentle course of mercury, with sarsaparilla and the nitric acid, as pointed out in the treatment of a confirmed pox, assisted by a proper diet and pure air, will generally effect a cure.

In cases of atrophy connected with, or dependant upon scrofula, and marked in children by an enlargement and induration of the mesenteric glands (seated within the belly), we must administer medicines that are calculated to remove obstructions, together with gentle purgatives from time to time, and tonics as advised under the head of scrofula.

When hypochondriac and hysteric affections are the cause, then, in addition to the means pointed out in the treatment of these diseases, we may prescribe a gentle emetic occasionally, together with chalybeates, exercise on horseback, cheerful company, and agreeable amusements.

Where there is a disposition to dropsical swellings of the legs from debility, we should administer diuretic medicines combined with those of a tonic nature, as specified under the head of Anasarca, or that species of dropsy in which the fluid is contained chiefly in the cellular membrane.

In every case of atrophy, attention should be paid to the state of the bowels, and if the stomach is loaded with crude matter, this should be dislodged by a gentle emetic ; or should costiveness be present from torpidity in the intestinal tube, the feculent matter contained therein ought to be evacuated by the assistance of some mild laxative. See this Class, P. 1, 3, or 5.

For the cure of atrophy or nervous consumption, the patient should live in a free open air, take sufficient and regular exercise daily, particularly on horseback, and invigorate his constitution not only by food of a highly nutritive nature and a moderate quantity of wine, but likewise by medicines of the tonic kind ; and for this purpose, the different infusions of cascarilla, calumba, gentian root, and the Peruvian bark, &c. may be taken twice a day, conformable to the prescriptions in the Class of Tonics, adding to each dose thereof from twenty to thirty drops of the diluted sulphuric acid.

With the like view of strengthening the whole frame, it is probable that cold bathing, and in sea water particularly, will prove beneficial ; but it will be most advisable for the patient to begin with a tepid bath, reducing it gradually to a cool, and at length to a cold temperature.

OF THE JAUNDICE.

Symptoms.—This disease is strongly marked by a yellowness of the eyes and skin, white or clay-coloured stools, urine highly coloured, and tinging linen yellow, whilst at the same time there is

universal languor and lassitude, with costiveness. As it advances in its progress, then in addition to these symptoms, the stomach and bowels become affected with acidities and flatulency, there is a loathing of all food, with frequent nausea and vomiting, a dull obtuse pain is felt in the right side of the lower part of the belly, which when pressed upon with the hand, occasions an aggravation of the uneasy sensation, the yellowness of the eyes as well as that of the whole surface of the body are much increased, obstinate costiveness, or a purging is present, the stools being still of a clay colour, there is a dryness and febrile heat of the skin, and generally the pulse is slow, yet sometimes, especially where the pain is acute, it becomes quick and hard.

Should the disease be long protracted, the skin, from being before yellow, turns brown, or livid, small purple spots now and then appear on different parts of the body, or perhaps passive hemorrhages and ulcerations break out. In some instances, the disease has assumed the form of scurvy.

Causes.—Jaundice is occasioned sometimes by passions of the mind, as anger, grief, &c. ; but it is more generally produced by inspissated bile, or concretions thereof in the gall bladder, or ducts through which it flows in its natural state into the intestines ; by collections of hardened feculent matter in the bowels ; by tumours of the neighbouring parts, such as the liver, spleen, stomach, mesenteric glands, &c. ; by a morbid redundance of bile ; by pregnancy ; by the bites of poisonous animals, as the viper, adder, &c. ; by attacks of the hysteric or bilious colic ; by taking cold, or the stoppage of some accustomed evacuation ; and by obstinate agues which have occasioned a derangement in the biliary system. In infants, it is apt to arise from the meconium, (that green excrementitious substance which is formed in the intestines of the fœtus) not being sufficiently purged off soon after birth.

The disease having arisen from a cause that admits of easy removal, as accumulated feculent matter in the intestines, spasm of the biliary ducts, temporary pressure during pregnancy ; the strength and appetite not being greatly impaired, the disease having come on suddenly, and the local pain ceasing, and being followed by a bilious purging, are circumstances to be regarded in a favourable light, with respect to the termination of the disease : on the contrary, if the patient has previously led a life of intemperance and intoxication, feels local pain or tumour either in the liver itself, or some of the neighbouring bowels, evidently pointing out an enlargement and induration of the part or parts ; if there are any hectic symptoms, profuse sweatings alternating with severe purgings, supervening dropsical swellings, or a flushed countenance, giddiness or head-ache, showing an improper determination of blood to the brain, or if jaundice is complicated with any other disease, then these several circumstances are to be looked upon as very unfavourable.

In what has by some been denominated the black jaundice, from the skin, which was previously of a deep yellow, becoming of a brown or livid colour, more danger is to be apprehended than in the disease as it commonly appears.

Treatment and Regimen.—In the cure of the jaundice, our attention must be directed to the removal of any obstruction to the proper passage of the bile into the upper portion of the intestinal tube, and afterwards to the palliation of those symptoms that present themselves as deserving of notice.

If the disease has arisen either from spasm, inspissated bile, or a concretion in some part of the biliary passages, and is attended with acute pain or other symptoms of fever, and the patient is young and of a full plethoric habit, it will be advisable to have a vein opened in the arm and a proper quantity of blood drawn away, proportioning this to existing circumstances; but if the pain is of an obtuse nature, and the person advanced in life, bleeding should be dispensed with. In such a case the warm bath is the first remedy to be resorted to, repeating it again the same day. When removed from the bath, flannels wrung out in a warm decoction of bruised poppy heads, and chamomile flowers, may be kept constantly to the part in which the pain is seated.

The bowels are next to be opened by an active cathartic, such as a pill containing four grains of the submuriate of mercury, followed in an hour afterwards by a solution of some neutral salt in an infusion of senna. See the Class of Purgatives, P. 4. Should the costiveness remain obstinate, the dose of both may be repeated after a lapse of four or five hours, assisted by administering a clyster of a little soft soap dissolved in warm water, or one of an emollient nature. See the Class of Emollients, P. 2 or 3.

Where the pain is very acute, and resists the effects of fomentations and aperient medicines, it will be proper to apply a blister over the part which is the seat of the uneasy sensation. Where the local pain is not acute, a gentle emetic is frequently attended with a good effect, not only by carrying off a considerable quantity of bile, but by its relaxant and antispasmodic powers, tending greatly to remove the obstruction in the biliary ducts. In such cases the aid of an emetic may be resorted to occasionally throughout the continuance of the disease, as well as a free use of purgative medicines, to obviate costiveness and carry off the accumulated bile from the intestines. Pills composed of aloes, rhubarb and soap (see the Class of Laxatives, P. 7,) may be tried for this purpose.

If the disease has arisen from either acute or chronic inflammation of the liver, then the means prescribed under these particular affections must be resorted to. In the latter case, where there is an enlargement of this organ or of the spleen, with obstruction or induration, mercury must be given internally, as well as be applied externally, in the form of unction, together with the other means pointed out.

Should the disease have arisen simply from an accumulation of hardened fæces in the intestines, we must have recourse to active purgatives, and copious clysters frequently administered.

Where the disease assumes the scorbutic form, acids and other remedies adapted to that complaint (see Scurvy) must be had recourse to.

Persons subject to jaundice ought to take as much exercise as possible, either on horseback or in a carriage: and if there be no symptoms of an inflammatory nature present, they may likewise walk, if it can be done without exciting pain. Amusements are likewise of great use in the cure of jaundice; for the disease is now and then occasioned by a sedentary life joined to a dull melancholic disposition, and therefore it may be advisable for such persons, if their income will admit of it, to resort to the Cheltenham, Harrowgate, or Bath springs, and drink the waters thereof, engaging at the same time in dancing, and the other entertainments which these places afford. In obstructions of the liver, and other organs connected with the functions of the alimentary canal, Cheltenham water has indeed proved of very essential service. Persons who from a long residence in warm climates have had their biliary organs affected, and who suffer from an excess or deficiency of bile, usually receive great benefit from a course of this water, if taken judiciously.

The most appropriate diet for persons afflicted with the jaundice, or in whom bilious concretions are apt to be formed, will be mild vegetables and cooling ripe aperient fruits, as roasted apples, stewed prunes, preserved plumbs, turnips, boiled spinage, &c. Veal or chicken broths, with light bread puddings, as also eggs, milk, &c. will be proper articles for food. The drink ought to be barley water, thin gruel, butter-milk, whey, or a decoction of dandelion, made of a pleasant taste with a little sugar or honey. The last of these remedies is a good laxative and deobstruent remedy in all derangements of the liver and other biliary organs; and should the decoction not be found sufficiently active of itself, from ten grains to one drachm of the extract, united with two drachms of the sulphate of potash, may daily be taken, dissolved in one ounce and a half of an infusion of senna.

OF THE DROPSY.

Dropsy consists in an effusion and preternatural collection of the serous or watery part of the blood in the whole of the body, or some part of it, and essentially interfering with the functions of life. Among professional men it bears different names, according to the different parts in which it is deposited. When it is effused in the cellular membrane, in whole or only partially, it is called anasarca; when in the cavity of the head or brain, hydrocephalus; when in the chest, hydro-thorax, or hydrops pectoris; when in the belly, ascites. In some instances the fluid is contain-

ed in a cyst or bag, as in the vaginal coat of the testicle, when it bears the appellation of hydrocele; and in others it is lodged in the ovaries (appendages to the womb), which is called ascites ovarii. Collections of a watery fluid in sacs are sometimes formed upon, and connected with one or other of the bowels, as in the ovaries of women, as also on the liver; and these constitute that species of the disease which has been termed encysted dropsy.

Symptoms.—Anasarca, or dropsy of the cellular membrane, usually commences in the lower extremities, and first shows itself with a swelling of the feet and ankles towards evening, which by degrees ascends, and successively occupies the thighs and trunk of the body. The swelling is soft and inelastic, retaining for a time the pressure of the finger; the colour of the skin is paler than usual, and, in the more advanced stages of the disorder, now and then exhibits more or less of a livid hue. When the effusion has become very general, the cellular membrane of the lungs partakes of the affection, the breathing becomes difficult, and is accompanied by frequent coughing and the expectoration of a watery fluid. The urine is scanty in quantity, very high coloured, and generally deposits a reddish or pinky sediment, although in a few instances it is of a pale whey colour. These symptoms are accompanied by insatiable thirst, dryness of the skin and costiveness, the countenance becomes sallow, and there is sluggishness and inactivity, together with a slow fever. When the cellular membrane of the legs and ankles is greatly distended, the water is apt to ooze through the pores of the skin, or raise it up in small blisters. The pulse is usually small and feeble.

The ascites (where the fluid is lodged in the cavity of the belly) often comes on with loss of appetite, inactivity, sluggishness, dryness of the skin, oppression at the chest, cough, diminished secretion of urine, and costiveness; soon after which, an enlargement and protuberance is perceived in the belly, and this gradually extending, at length occasions it to become very tense and much swelled. In a small degree the swelling is elastic, and communicates to the hand, when struck against it, the sensation of an undulating fluid.

Hydo-thorax, or dropsy of the chest, is attended with great difficulty of breathing, which is much increased upon any exertion, and most considerable during the night, when the body is in a recumbent position: there is a distressing sense of weight and oppression at the chest, great thirst, a scanty discharge of urine, and a swelling of the extremities, from a fluid effused in their cellular membrane. The countenance is pale in general, but has sometimes a purple tinge diffused over it, with an expression of great anxiety; the pulse is irregular, and often intermitting for two or three strokes: the heart palpitates, and there is coughing, with an expectoration frequently tinged with blood. The patient feels some difficulty of lying on one side, perhaps; and when the disease exists in both sides of the chest, he is incapable of lying down at all, and finds

it necessary to be supported in an erect position by pillows placed under his shoulders and head. Sleep is usually much disturbed by frightful dreams, and not unfrequently he awakes under a sense of suffocation, suddenly starts from his bed, and some time elapses before he recovers his recollection. If the water is effused only on one side of the chest, the arm of that side is generally cold, and often affected with numbness.

According as more of the following circumstances take place, there will be strong grounds for supposing that encysted dropsy exists, and we shall be able to distinguish between cases of this species and ascites. Where the distention of the belly and tumour have appeared in one part of the belly more than another, and even these have become general, yet, if the strength be not much impaired; if the appetite continue tolerably good, and the natural sleep be little interrupted; if there yet be no anasarca, or, although it may have already taken place, if it be still confined to the lower extremities, and there be no pale or sallow colour in the countenance; if there be no fever, nor so much thirst or scarcity of urine as occur in a more general affection, and if menstruation in females continues as usual.

We may generally presume that the water is effused in the cavity of the belly, and that ascites and not encysted dropsy exists, when the preceding symptoms give cause to suspect that a general dropsical tendency prevails; when at the same time some degree of dropsy appears in other parts of the body; and when, from its first appearance, the swelling has been equally diffused over the whole of the belly.

Hydro-cephalus or lodgment of water in the cavity of the head, being a disease chiefly confined to young children, is included among the disorders peculiar to them.

Causes.—The several species of dropsy are occasioned by an exposure to a moist and unwholesome atmosphere, crude and indigestible aliment, drinking large quantities of watery fluids, an abuse of spirituous and other intoxicating liquors, certain organic diseases producing an obstruction to the free circulation of the blood, as jaundice, enlargement and induration of the liver, spleen, &c.; the sudden striking in of eruptive complaints, the stoppage of some accustomed discharge, as the piles, menstruation &c.; too frequent bleedings, strong purgatives, repeated salivations, or immoderate evacuations of any kind. Dropsy is very properly ranked among the diseases incidental to those who lead a sedentary life; and a want of due exercise to invigorate the constitution, may be considered as a predisposing cause. Certain preceding diseases, such as scarlet fever, diarrhæa, dysentery, pulmonary consumption, gout, and intermittent fevers of long standing may give rise to it also.

Increased effusion and diminished absorption united, may be considered as the immediate cause of dropsy.

Pregnancy is the only affection that can be confounded or be mistaken either for ascites or dropsy of the ovaries: but by care-

fully attending to the symptoms which are enumerated under the heads of both, we cannot fail in being able readily to distinguish between these affections.

If the patient be strong and vigorous, and the disease a primary one, appearing suddenly, arising from cold, or any other recent cause; and if during the progress of the disease, the thirst diminishes, the skin becomes moist, the urine increases in quantity, the respiration is free, the appetite tolerably good, the constitution of the patient previously unimpaired; we are to regard these as favourable symptoms, and with proper care and management may hope to be able to effect a cure. But if the disease is attended with very great thirst, feverish heat, a small quick pulse, great emaciation, much drowsiness, erysipelatous inflammation, purple spots, hemorrhage, intense local pain, and occurs in a shattered constitution, or has arisen from concomitant organic affection or obstruction in the liver, spleen, &c. there will be strong grounds for our supposing that the termination will be a fatal one.

Regimen and Treatment.—The diet of a dropsical person should consist chiefly of meats that are easy of digestion, either roasted, boiled, or stewed down into soup or rich broth, as likewise of vegetables of a pungent and aromatic nature, as horse-radish, watercresses, asparagus, onions, shalot, garlic, mustard, spices, &c. The drink may be wine and water, or very weak Hollands and water, with his meals; and at other times, when thirsty, he may assuage this by taking small quantities of mustard whey, a decoction of green broom, or an infusion of juniper berries, made pleasant by the addition of a little sugar or honey. It is a very mistaken notion to prohibit a moderate use of liquids; indeed, these are necessary not only to allay thirst, but to assist diuretic medicines in producing a proper effect on the kidneys.

Regular exercise is of great importance in dropsy, and if the patient be capable of walking, he ought to continue it as long as he can. If he be not able to walk, he must ride on horseback, or in some kind of carriage, and if he can bear a rough one, so much the better. By night he should lay on a hard bed, and the air of his apartment be warm and dry, but it should not be kept too close, lest the breathing become oppressed and difficult. The head and shoulders ought to be elevated. If the patient resides in a damp house or situation, he ought to be removed into a dry one, and every method be taken to promote a due perspiration, at the same time that the attention is directed to increase the tone and energy of the whole system. Flannel or fleecy hosiery should be worn next to the skin, this being admirably adapted to restore as well as keep up the natural excretion through the skin. Every part of the body, particularly the extremities, ought to be frequently rubbed with coarse flannel, or a flesh brush, and the legs and feet not only be warmly covered with worsted stockings, but if much distended with water effused in the cellular membrane, be kept in a horizontal posture as much as possible, to prevent the skin of these parts from cracking or rising in small blisters.

In the treatment of dropsy, the objects to be kept in view are, first to evacuate and carry off the fluid which is effused in the cellular membrane, or collected in some cavity; and secondly, to prevent its again accumulating.

To effect the first of these, the different excretions must be increased by three classes of medicines, viz. purgatives, diuretics, and diaphoretics; but particularly by the two first, assisted by scarifications or punctures, blisters and frictions. If the disorder has come on suddenly, and the patient is of a good constitution, it may be advisable to commence the cure with a gentle emetic, (See this Class, P. 3.) of which squills is one of the ingredients. This may be administered in the evening, and the succeeding morning some active purgative (See Drastic Purgatives, P. 2, 4, or 5). The supertartrate of potash combined with scammony or elaterium (wild cucumber) is, from its diuretic as well as aperient quality, the most proper kind of cathartic that we can employ, and will seldom fail in carrying off a considerable portion of watery fluid by stool. Within the course of a few days, the purge is again to be repeated; and again a third time, unless the patient is in a reduced and emaciated state.

In the intervals, or days between the doses of the purgative medicines, such as are of a diuretic nature should be administered. In addition to the supertartrate of potash, squill, foxglove, nitre, and the acetate of potash, will tend to increase the secretion of urine, and help to carry off a portion of the effused or accumulated fluid. These may be taken agreeable to the forms inserted in P. 1, 2, 4, 5, 6, Class of Diuretics; and to encourage their effect, diluting liquids may be drank freely at the same time, and none can be more appropriate than a decoction of green broom made pleasant by the addition of a little sugar, or an infusion of juniper berries, mustard seed, and horse-radish, conformable to P. 7 and 8, under the same head.

It has been mentioned that diaphoretic remedies are sometimes employed in dropsy, with the view of carrying off a portion of the effused fluid; but I have ever found this class of medicines too inert in this disease, and with the exception of a vapour bath have never placed confidence on any of them, having in most cases succeeded by administering an active purgative every four or five days, followed up during the intervening ones by diuretic medicines and diluting liquors of the like nature; and this is the plan that I would recommend to others.

When the legs and feet become very much distended with the effused fluid, it may be necessary to scarify them, so as to give vent to some portion of it; but great care should be taken to make them so superficial as not to extend to a greater depth than the cellular membrane, as deep punctures or incisions in dropsical parts are very apt to become gangrenous and mortify. Having made light scarifications, the limbs may be well fomented with flannel cloths wrung out in a warm infusion of chamomile flowers, or

even in hot water, to assist in discharging the fluid. Should the wounds show any tendency to mortify, they may be smeared with camphorated spirit, or diluted oil of turpentine, afterwards dressing them with some digestive ointment, such as the resinous.

Blisters have occasionly been applied to anasarcous limbs, with the like view of drawing off a portion of the fluid, and now and then issues below the knees have been inserted; but neither of these are so safe and advisable as slight scarifications or gentle punctures, because if inserted in parts that have lost their proper tone or energy, gangrene or mortification might be apt to ensue.

Indeed it not unfrequently happens that inflammation of an erysipelatous nature arises on anasarcous legs, which of itself shows a tendency to become gangrenous. In such cases linen rags, well moistened in a strong solution of the superacetate of lead in water, in the proportion of two drachms of the former to about half a pint of the latter, will be the best application; and it is deserving of a preference even to the Peruvian bark, either in the form of fomentation or poultice.

If it is a case either of ascites or encysted dropsy of the ovary, and the plan of treatment which has been pointed out has not succeeded in carrying off much of the accumulated fluid, and the patient suffers greatly from the distention, the aid of a surgeon will be required to draw it off by what is vulgarly called tapping. The operation is seldom attended with fatal consequences, and ought never to be too long delayed, as but little advantage is to be expected from it beyond removing the fluid for a time, when the bowels and other organs contained in the cavity of the belly have been greatly injured by soaking a long time in it. In most cases, however, the remedy proves only a palliative one, and a fresh accumulation takes place; but in a few instances where a proper course of diuretics, assisted by an occasional purgative, has been rigidly adhered to immediately after the operation, no re-accumulation of the fluid has taken place, and in a great many it has been much retarded.

When the disease proceeds from any chronic visceral obstruction, such as of the liver or spleen, the fluid, after having been drawn off by tapping, may possibly be prevented from re-accumulating, by rubbing in half a drachm of the strong mercurial ointment every night over the belly, giving at the same time diuretics three or four times a day, and some active purgative once or twice a week in the manner before-mentioned.

If dropsy has arisen in a weak and enfeebled frame of body, it will be necessary, after the water has been evacuated by the means which have been pointed out, to put the patient under a course of strengthening medicines, such as the Peruvian bark, stomachic bitters, and aromatics; giving at the same time some diuretic to increase the flow of urine, or we may combine the latter class with the former, as follows. Let the patient take two of the pills agreeable to P. 20, in the Class of Tonics, night and morning, washing

them down with a dose of either an infusion or decoction of foxglove (See the Class of Diuretics, P. 5 and 6), or with the same of green or juniper berries, conformable to P. 7 and 8. If this plan is not approved of, any prescription of either the Class of Tonics or Diuretics may be given in alternate doses.

The diet under the circumstance just mentioned, should at the same time be highly nutritive; a moderate quantity likewise of wine be taken with the food, gentle regular exercise be used, and the body kept warm by proper clothing. If the patient is in a fit state for cold bathing, this may be adopted, provided the season of the year admits of it.

The same evacuant and diuretic course must be observed in hydro-thorax or water of the chest, as has been recommended for the cure of anasarca and ascites; but should these means prove ineffectual, and the disease appear purely local, recourse should be had to the aid of a skilful surgeon, that he may draw off the water by an opening made between the ribs into that side of the chest where the water is collected. This step, however, is to be considered as the last resource, and only to be adopted when the power of medicine is of no avail.

OF SCROFULA.

The characteristic signs of this disease are swellings of the lymphatic glands, chiefly in the neck, a thick upper lip, smooth skin, florid complexion, most usually enlargement of the belly, and obstinate ulcers. It generally arises between the third and seventh year, yet sometimes later, and even at the age of puberty, particularly in persons of a relaxed habit, of an irritable fibre, and fine skin.

Symptoms.—When it makes its appearance, it is attended with hard, unequal, or knotty tumours in the glands about the neck, and under the jaws. In the eyes, it creates inflammation; on the eyelids a soreness and small ulcerations: there is a thickness of the upper lip, the face is florid, the skin smooth and shining, and the belly swelled. The tumours do not suppurate readily or kindly, and in process of time their contents acquire a degree of acrimony, sufficient to irritate and corrode the surrounding parts. The matter in the abscess is thin, and mixed with a whitish crudy substance. After a time some of the ulcers heal, but other tumours quickly form in different parts of the body, and proceed on to suppuration in the same slow and imperfect manner as the former ones. The disease goes on perhaps for a few years, and appearing at last to have exhausted its powers, all the ulcers heal up without being succeeded by any fresh swellings, but they invariably leave behind them scars of considerable extent, together with unsightly puckings of the skin of the parts they have occupied. Sometimes the humour does not show itself externally, but settles on the interior parts, such as the lungs, producing tubercles, a cough, hectic fever,

wasting of the flesh and strength, together with other symptoms of pulmonary consumption.

Sometimes the disease attacks the joints, they swell and are affected with deep-seated and excruciating pain, which prevents any kind of motion of the part. The pain and swelling continuing to increase, matter is at length formed, and this is discharged at small openings made by the bursting of the skin. The cartilages and ligaments become eroded, and a caries of the bone not unfrequently follows; the muscles of the limb are greatly wasted, and in consequence of an absorption of the matter from the diseased parts into the constitution, hectic fever and other fatal symptoms ensue. Sometimes the disease gives rise to what are known under the appellation of white swellings in the joints, particularly in that of the knee, and not unfrequently the mesenteric glands are greatly enlarged by it, so as to occasion a tumefaction of the belly with a knotty hardness, readily to be perceived in many instances by pressing with the fingers upon it.

Causes.—Scrofula is a disease nearly confined to cold and variable climates, and its attacks seem greatly influenced by the seasons of the year; for they usually come on in the winter and spring, and are much amended in summer and autumn. It is very frequently the effect of an hereditary predisposition, and is excited into action by living in a low, damp, and cold situation, by crude indigestible food, bad water, neglect of due cleanliness, &c. It is, indeed, a disorder closely connected with general debility, and frequently occurs in children of a delicate constitution and lax fibres. It is much met with in this country, particularly in large manufacturing towns, owing no doubt to a want of due exercise, a sufficient quantity of nutritive food, comfortable lodging and clothing, and proper cleanliness. Occasionally the disease is brought into action by preceding diseases, such as the small pox and measles, as also by a course of mercury given to eradicate some venereal taint.

There is no malady, a predisposition to which parents are so likely to communicate to their offspring as scrofula; for which reason it will require great precaution not to marry into families affected with this disease. It does, however, occasionally pass over one generation, and appear again in the next.

Scrofula is by no means of a contagious nature; nor can it be transferred from one person to another by inoculation, the experiment having been tried without effect: indeed, the matter discharged from scrofulous sores does not seem to possess much acrimony; for if the sore be of limited extent, and not occupying a joint, the system does not suffer much by its continuance; nor do the neighbouring parts seem to be affected by its vicinity.

Although scrofula on leaving one part is usually renewed in others, still it is not attended with danger if confined to the external surface of the body, and apart from a joint; but when the ulcers spread, become deep, erode, and the discharge is highly acrimonious, or when deep-seated collections of matter form in the joints,

or among the small bones of the hands or feet, or when tubercles in the lungs, or an enlarged and diseased state of the mesenteric glands take place with hectic fever and such like symptoms, the termination may be a fatal one.

Treatment and Regimen.—Among the many remedies recommended for the cure of scrofula, there is none so efficacious as living by the sea-side, and bathing in the water thereof, drinking at the same time as much of it occasionally as will keep the bowels sufficiently open. The use of sea water will, however, answer best before there is any suppuration. After hectic symptoms have become apparent it would be improper. When sea water cannot be resorted to or obtained, the patient may be bathed in fresh water, in which a handful or two of common salt has been dissolved, or even in cold fresh water, procuring stools occasionally, if necessary, by some mild laxative medicine. See this Class, P. 5, 6, or 11.

Next to cold bathing and drinking the sea water, tonic medicines, such as myrrh, preparations of iron, and the Peruvian bark, will be found the most useful remedies. These may be given combined together, or separately; if in the former manner, two of the pills in the Class of Tonics, P. 19 or 20, may be taken morning and night, washing them down with three table-spoonsful of P. 8 or 9. If separately, a drachm of the powder of the bark may be taken by an adult three or four times a day, mixed in a little wine and water, and half a drachm by children. Those who cannot take this medicine in substance, may substitute either a decoction or infusion of it mixed with some stomachic bitter, such as calumba, or cascarilla, and also with diluted sulphuric acid, conformable to P. 8 or 9 of the before-mentioned Class; or they may take the sulphate of quinine in the dose of from three to five grains, made into a pill with the extract of gentian; or, if more agreeable, in the form of a draught, (See P. 27, Class of Tonics) repeating the medicine three times a day.

Mineral waters of the sulphureous and chalybeate kind, as those of Harrow-gate, Bath, and Tunbridge, often prove serviceable to those who are afflicted with scrofula. Alkalies, particularly the carbonate of soda, are frequently given conjoined with the Peruvian bark, and in some cases have been attended with a good effect. They may be made a trial of conformable to P. 9 or 10, Class of Deobstruents, or we may give the soda combined with rhubarb and magnesia, in the proportion of ten grains of the former, a scruple of the latter, and three grains of the rhubarb, which dose may be repeated night and morning.

Mercurial alteratives have sometimes proved beneficial in scrofulous cases; and therefore calomel conjoined with antimony (See the Class of Alteratives, P. 4 or 5), as likewise the oxymuriate of mercury, (corrosive sublimate, See P. 9 or 10), drinking at the same time half a pint, or a pint daily of a decoction of sarsaparilla and sassafras (See P. 12 and 13,) may be tried.

Hemlock is another remedy which has been much given in instances of a like nature, and its best preparation is the extract, of which, from one to two grains made up into a pill may be taken twice or thrice a day, gradually increasing the quantity in each dose until it produces some evident effect on the person, such as giddiness in the head or nausea. Hemlock often proves serviceable in discussing scrofulous swellings when given internally; it is, however, rather a harsh medicine for young children, but a very appropriate one for adults.

Iodine having been found a very efficacious medicine in removing goitre or bronchocele, it has been strongly recommended in those glandular enlargements frequently observed in the necks of persons who are of a strumous or scrofulous habit of body. Under a failure of other medicines and remedies, it may therefore be administered internally, as well as applied externally, in the doses and manner mentioned under the head of the Derbyshire Neck or Goitre, or in the P. 13, 14, and 15, Class of Deobstruents. If the internal use of the medicine produces nausea, giddiness in the head, or any other unpleasant effect, the dose must be diminished, or the remedy discontinued for a time, trusting wholly in that case to its external application; but employing the frictions with the liniment or ointment more assiduously.

In all scrofulous cases, and throughout every stage of the disease, it will be necessary to pay proper attention to the state of the bowels, and to obviate costiveness when present. If the patient is debarred from the benefit of drinking salt water at the sea-side, or he cannot obtain stools in the natural way, he may occasionally take a powder, consisting of two grains of the submuriate of mercury (calomel) mixed with ten or twelve grains of rhubarb and the like quantity of magnesia.

Besides giving medicines internally to amend the habit of body and strengthen the system, it is frequently necessary to make use of external applications to the parts that are either swelled or ulcerated. In the early stage of the swellings, they may probably be dispersed and prevented from suppurating, which is a very desirable point. This is to be attempted by discutient applications, various forms of which are given under the head of this Class, and to which I beg leave to refer the reader. If the one first used does not answer, any of the others may be tried. Where sea bathing can be obtained, it is to be preferred to all other external applications: indeed the sea tang which is thrown on shore by the surf being bruised and made into a poultice, is also sometimes employed with benefit.

In cases of indolent enlarged glands, simple friction with the hand, continued for a considerable length of time each day, has now and then answered when other remedies which were used had failed.

When we are foiled in our attempts to disperse scrofulous swellings, and a suppuration has taken place which is sufficiently ad-

vanced to be punctured, it will be best to evacuate the contents of the tumour by opening it with a lancet in preference to allowing it to break spontaneously, as the latter seldom fails to leave behind an irregular and puckered wound. After puncturing the abscess, and pressing out as much of its contents as we can readily do, it will be advisable to inject into the cavity a solution of the sulphate of zinc in water, in the proprotion of eight grains of the former to each ounce of the latter. The sore or sores may be daily washed with the same solution, for this will stimulate them to throw out healthy granulations. Should these rise above the surface of the skin in time, a poultice of bruised sorrel leaves may be applied.

The best dressing to apply to scrofulous sores, will be resinous ointment, mixed with a very small proportion of the red precipitate of mercury. With this the sores may be dressed morning and night, having previously cleansed and washed them well with a solution of the sulphate of zinc, as before mentioned. Some indeed recommend a solution of the oxymuriate of mercury (corrosive sublimate), or the nitrate of silver, as a wash; but that of zinc has appeared to be entitled to a preference. Hemlock has also been employed externally in the form of fomentation and poultice in some cases of scrofulous ulcerations with advantage.

In the case of a white swelling in the knee, or the enlargement of any large joint, the frequent application of leeches in the first stage of the disease, and of repeated blisters afterwards, are the means most likely to afford relief.

Should scrofula give rise to tubercular consumption, the remedies and other steps recommended under the head of this disease, must promptly be had recourse to.

From keeping scrofula under by a palliative mode of treatment as herein pointed out, a change of constitution sometimes takes place on the person's attaining the age of puberty, and then he will suffer no further inconveniency from it; but if this desirable occurrence should not take place, he may labour under its influence throughout the remainder of his life, and be affected with ulcerations in different parts of the body, or with an inflammation and acrimonious discharge from the eyelids, and not unfrequently with an opacity of the transparent cornea, occasioning imperfect vision, or a total loss of sight in the eye affected.

The diet in all scrofulous cases should be light, but of a highly nourishing quality, consisting principally of young flesh meats, good broths and soups, and well fermented bread, allowing a glass or two of good wine, ale, or porter, daily; for scrofula is a disease of debility, and requires food that is calculated to strengthen the body. It is also important that persons afflicted with it should take as much exercise every day as they can bear without fatigue, that they breathe a pure and dry air, and that they pay a due attention to cleanliness.

A distortion or diseased state of one or more bones of the spine

is occasionally met with in persons of a strumous or scrofulous habit, and this by a lateral or oblique twist more generally by the antero-posterior bend or gibbosity. In the treatment of such deformities, it has not been unusual to employ mechanical means; but against all such I beg leave to express, with many others, my strong disapprobation; whilst at the same time I give it as my opinion, that the carrying a weight on the head, as suggested by one or two surgeons, must in every case of contorted spine prove highly injurious.

The means I would recommend in all such cases are frictions, manupilation, an attention to position, and gentle exercise in the open air. The inclined plane and horizontal position *occasionally* used, will no doubt prove highly beneficial, and is a very convenient and natural way of obviating distortion in young persons of a tall slender figure and delicate frame; but to confine an individual to it for many months, unless there is positive disease of the vertebræ or small bones of the spine, and which point may be ascertained by a proper examination and due attention by any surgeon of experience, is evidently useless, and must defeat the purpose intended.

Where one or more bones of the spine, or their connecting ligaments are in a diseased state, it is not unusual to apply an issue made with caustic on each side of the part affected, confining the patient at the same time to a recumbent position, and in a state of perfect quietude for many months; which plan of proceeding has in some instances succeeded. If an abscess any way connected with the spine makes its appearance, there cannot be the smallest doubt of the propriety of establishing an issue on the side of the ridge opposite to that from whence the matter oozes out.

By persons superintending the education of young females, various mechanical contrivances, such as collars, back-boards, steel boddices, stiff stays, stocks, education chairs, (as they are named) and reclining beds, have of late years been much employed; but in all probability a much better mode of preserving the symmetry and elegance of the figure of girls would be to subject them, under proper restrictions and the watchful eye of the governess, to school-drilling through some properly qualified person.

A fashionable education (as it has been termed) where the attention of the governess is directed as much, if not more, to the improvement of the shape and erect figure of the pupil as to her intellectual attainments, has in many a young female, brought with it a ruined constitution, attended either with a distortion of the spine, a prominent hip, a higher and lower shoulder, an anterior and posterior (instead of a right and left) breast, together with many other deviations from the natural form. A fine shape and commanding figure are beyond doubt highly attractive; but the parent who hopes to get his daughter off in the world by her possessing these, in consequence of her having been subjected

at an early age to mechanical contrivances, may perchance have his hopes blasted by the chilling hand of disease, which, while it deforms the body, must most assuredly deteriorate the mind also, and sour the disposition.

OF THE SCURVY.

The scurvy is a disease of a putrid nature, very frequently met with among seamen who have made long voyages, as well as soldiers and others shut up for a length of time in besieged places and garrisons, thereby experiencing a deficiency of sound nourishing animal food and vegetable productions.

Symptoms.—It comes on with heaviness, weariness, dejection of spirits, anxiety, and oppression at the chest. As the disease advances the countenance becomes sallow and bloated, the breath is offensive, and respiration hurried on the most trifling exertion; wandering pains are felt in different parts of the body, particularly during the night, the pulse is small and frequent, the gums swell and become spongy, they bleed upon the slightest touch, they separate from the teeth, and these become loose; purple spots appear in various parts of the body, the slightest scratches degenerate into foul and ill-conditioned ulcers, the gums ulcerate, the joints are swelled and stiff, the tendons of the legs rigid, contracted, and painful; the urine is high coloured, and changes vegetable blues to a green colour, the bowels are either obstinately costive or there is a purging, the flesh is much emaciated and the strength reduced, the excretions become very fetid, and hemorrhages take place from the nose, ears, gums, and fundament; still, however, the appetite frequently is not much impaired, and the patient retains his mental faculties until death at last relieves him from a state of misery.

Causes.—Scurvy is occasioned by defective nourishment, a diet of salted or putrescent food with a deficiency of vegetables, long exposure to cold moist air, depressing passions of the mind, as grief, fear, &c., the neglect of cleanliness, want of proper exercise or due clothing, and perhaps from contagion, as it is very apt to spread on board of ships, and also in besieged places and garrisons, when once it makes its appearance; but this may possibly be owing more to a number of persons being acted upon by the same exciting causes than to the spread of contagion.

In forming an opinion as to the result or termination of the disease, we must be guided by circumstances, such as the severity of the attack, the time which has elapsed since it came on, the degree of debility which exists, and the situation of the patient with respect to a vegetable diet, or other proper substitutes.

The strength not being much reduced, the person being capable of muscular motion, the constitution not impaired by previous disease or habits of intemperance, the pulse being slow, the skin moist, the bowels rather open, and the absence of ulceration or purple

spots, are to be considered as favourable circumstances. On the contrary, great reduction of strength, a weak quick pulse, redness of the eyes, flushed countenance, extreme oppression at the chest or anxiety, fetid and involuntary stools or urine, profuse hemorrhages of dissolved blood, and spots of a dark livid colour dispersed over the body, point out imminent danger, and the almost certain destruction of life.

Regimen and Treatment.—The indications of cure in this malady are to correct the putrid tendency of the fluids, to palliate any symptoms that may be urgent, and to strengthen the general habit.

The first of these is to be done by substituting vegetables of all kinds, instead of salted animal food, as also subacid fruits when they can be procured, such as oranges, lemons, shaddocks which partake of the qualities of the two former, tamarinds, apples, currants, gooseberries, &c. The patient may freely use fermented and fermenting liquors, as ale, porter, cider, spruce beer, and infusions of malt with an addition of yeast at the time. If there be great prostration of strength, a proper quantity of wine ought to be allowed daily, diluting it with a little water, and acidulating the whole by a sufficient addition of the fresh juice of lemon or oranges. Where these are not to be had, such articles should be made use of as approximate nearest to their quality, as the concrete citric acid, supertartrate of potash, preserved tamarinds, vinegar, and the diluted sulphuric acid.

Fresh vegetables, as well as fruits in their natural state, should be obtained if possible, but if they cannot, preserved or pickled ones must be substituted. Among these, what is known by the name of sour crout (which is cabbage preserved with vinegar, &c.) has been much extolled as an excellent antiputrescent article of diet; and the citric acid in a concrete form has been much employed instead of the fresh juice of the lemon. Before the discovery of this preparation it was customary to use the mineral acids in the prevention and cure of scurvy on board of ships during a long voyage, but they cannot be given with safety in a sufficient quantity to prove very effective antiputrescents.

Where lemon juice is not to be procured either in a fresh state or in a concrete form, a solution of nitre in vinegar in the proportion of two ounces of the former to one quart of the latter, may be substituted; this having been tried by one of our navy surgeons during the late war, and with very good effects, without its exciting the smallest degree of nausea, colic, or diarrhæa. The patient may begin with half an ounce of the solution, repeating this twice or thrice a day, with the addition of a small quantity of water, increasing the dose after a day or two, to one ounce of the solution. If the bowels become constipated from a use of the nitric vinegar, from half a drachm to one drachm of the supertartrate of potash (cream of tartar) may be given between each dose of the nitric vinegar, until sufficient stools are obtained. Should the stomach

and intestines be at all ruffled by the solution, three or four grains of camphor with each dose of the medicine will remove it.

Besides paying great attention to diet, it will be highly necessary to observe the strictest cleanliness in keeping the apartments of the sick clean, and allowing a current of fresh air to pass through them as often as possible. When the air has become damp or impure, it should be corrected by fires made in braziers, or any other convenient manner, placed in different parts of the ship. If this is impracticable, the apartments or births, as they are termed, on board of ships, should be fumigated with the vapours arising from either the nitrous or muriatic acid (see the modes of using them in the Introductory part of the Work, page 65), as they will not only render the air pure, but will also destroy any contagion which, from such causes, is very apt to be generated, when many sick persons are lodged together.

Scorbutic patients should not breathe a damp, cold, or confined air, if it possibly can be avoided; they should be removed to a dry, open, and moderately warm one; they ought to take daily as much exercise in the open air as they can bear, and their minds should be soothed by amusements and cheerful society, as a sedentary life and depressing passions greatly assist in producing the disease, and always aggravate it when it has taken place.

With regard to particular symptoms which it may be requisite to palliate, if the patient is harassed by acute pains which debar him of rest at night, these may be relieved by a pill containing one grain of opium, or by an anodyne draught, consisting of forty drops of the tincture of opium, in an ounce of camphor mixture. If there is a difficulty of breathing or oppression at the chest, a blister may be applied, or should there be contractions of the muscles of the legs, we may employ warm fomentations of vinegar and water, or emollient poultices, together with occasional frictions with the hand or soft flannel.

Ulcerations of the gums will require a frequent use of gargles, composed of an infusion of roses, alum, and sulphuric acid, or of a decoction of bark, with muriatic acid and tincture of myrrh. See the Class of Astringents and Antiseptics, for a variety of these. Ulcers on the surface of the body may be dressed with lint, impregnated with a decoction of the bark and tincture of myrrh, in preference to any oily or greasy applications, which are apt to prove detrimental.

If costiveness prevails in the course of the disease, and the bowels are not sufficiently acted upon by a free use of fresh vegetables, we can advise nothing better to open them than a solution of preserved tamarinds in warm water, adding a drachm or two of the supertartrate of potash.

Should the skin be dry and parched, it may be proper to excite a gentle perspiration on the surface of the body, by giving eight grains of the compound powder of ipecacuanha morning and night, mixed in two ounces of camphor mixture, or two grains of anti-

monial powder made into a pill, washing it down with a small tea cupfull of the compound decoction of sarsaparilla. See the Class of Alteratives, P. 12.

Where any hemorrhage or discharge of blood comes on, it ought to be suppressed as speedily as possible by the application of some styptic. See this Class, P. 2, 4, or 5.

To strengthen the general habit, in addition to pure temperate and dry air, regular exercise and a nutritive diet of vegetables and fresh animal food, with a moderate allowance of wine, the patient may enter on a course of tonic medicines, such as some of the preparations of iron, and the Peruvian bark, with a few drops of either the nitric, muriatic, or diluted sulphuric acid, added to each dose. See the Class of Tonics for various forms of these remedies.

In the disease known under the appellation of the land scurvy, which shows itself in eruptions dispersed over various parts of the body, the patient should abstain from all salted animal food, and confine his diet in a great measure to fresh vegetables, drinking spruce beer, cider, buttermilk, &c., at his meals, and partaking freely of ripe subacid fruits.

In inveterate cases, it may be necessary to go through a course of gentle alterative medicines, such as a combination of antimony and mercury (See the Class of Alteratives, P. 5, 9, or 10), drinking daily about a pint of either the compound or simple decoction of sarsaparilla. See P. 12 and 13 of the same class. In such cases, the sulphurated warm bath has often greatly relieved persons severely afflicted, drinking at the same time some of the water. Harrowgate will therefore be a proper place to resort to on such occasions.

Where the gums are spongy and the teeth rather loose, the putrid tendency in the parts may be corrected by washing the mouth three or four times a day with some antiseptic or astringent gargle, as before-mentioned.

BLOTCHED OR PIMPLED FACE.

This complaint shows itself in an eruption of distinct, hard, and inflamed spots or tubercles, which sometimes are permanent for a considerable length of time, and now and then suppurate slowly as well as partially. They appear on the forehead, temples, and chin, and occasionally they are to be observed also on the neck and shoulders. As the progress of each tubercle is slow, and they appear in succession, they are usually to be perceived in the various stages of growth and decline at the same time ; and in the cases of a more violent nature are frequently intermixed with the marks or remains of those which have subsided.

The eruption occurs mostly in persons of the sanguine temperament, and in the early part of life, or rather from the age of puberty

to thirty-five years. Both sexes are liable to it; but it is more usually met with under a severe form in men than women.

There are some varieties of the disorder. In one of them the eruption consists of a number of black spots or points, surrounded by a slight border of cuticle. It has been usual to consider these as the extremities of small worms or grubs, as when they are pressed out with the fingers, a sort of worm-like appendage is perceived attached to them, although in reality they are only concreted sebaceous matter moulded into this form in the ducts of the glands which secrete it, the extremity being blackened by an exposure to the air. In consequence of the distention of the ducts, the glands themselves sometimes inflame, and form small tubercles with black points on their surface, which suppurate partially; but many of them perhaps remain stationary for a long time without inflaming.

In another variety of the complaint the tubercles are large, indurated, and permanent: they are of a conical form, and of a roseate hue. They are frequently numerous, and run much into each other. In their progress, the vivid red is changed into a purple or livid colour, especially in the tubercles which show no disposition to form matter.

Another variety is marked by a shining redness, and an irregular or annulated appearance of the skin in that part of the face which is affected with tubercles. The redness commonly appears at first at the tip of the nose, and then spreads to both cheeks. At the commencement, it is not uniformly vivid, but is paler in the morning, and readily increased to a deep red after dinner, or at any time that the patient is either heated by exercise or sitting near a fire, or when he takes a glass of wine or spirits of any kind. After some continuance in this state, the cuticle becomes gradually thickened, and its surface uneven or granulated, with small red lines stretching across the cheeks, and sometimes by an intermixture of little suppurating tubercles, which arise successively on different parts of the face.

Causes.—In many cases a blotched or pimpled face cannot be referred by the patient to any obvious existing cause. Its first appearance has been ascribed by many persons afflicted with it to an irregularity of diet, or to their having swallowed some cold liquor when they have been overheated by exercise and in a profuse perspiration. That species of the complaint which has been mentioned the last, may be produced by an hereditary predisposition, as also by an intemperate use of vinous or spirituous liquors; in which case the greater part of the face, but the nose in particular, becomes tumid and of a fiery red colour; and in advanced life it now and then enlarges to an enormous size. At this period the colour becomes darker and more livid; and if suppuration takes place in any of the tubercles, they are apt to put on an unfavourable appearance, and are not disposed to heal readily.

Treatment and Regimen.—The two first species of the disease may be greatly alleviated, and sometimes entirely removed,

by paying a proper attention to diet; which, instead of consisting chiefly of vegetables, should be highly nutritive and generous; but at the same time light and easy of digestion. Wine and fermented liquors of all kinds are to be used with caution.

It is too usual in this complaint to resort to a frequent use of purgative medicines; but, in feeble habits these will only tend to increase it, and ought therefore to be avoided, taking care at the same time that costiveness is removed and the bowels not suffered to be confined.

Medicines administered internally have generally been supposed to be but of little service; but in some inveterate cases, an amendment has been observed from giving small doses of the carbonate of soda, sulphur, and antimony, as in the succeeding form, using external applications at the same time. Take of the carbonate of soda, twenty grains; washed sulphur, two scruples; and antimonial powder, one grain. Mix them well together, and let this dose be taken morning and night, persevering in the use of the medicine for a considerable time.

As an external application, some lotion of a gently stimulating nature may be employed twice a day; such as a drachm and a half of the solution of potass, mixed with six ounces of rectified spirit, or equal parts of distilled vinegar and the solution of acetate of ammonia. Should these prove too stimulating, a wash composed of equal parts of rectified spirit and elder flower water may be substituted. An empirical preparation, vended under the name of Gowland's Lotion, has been much used in cases of pimpled or blotched face, and occasionally with some advantage. This nostrum is supposed to consist of about one grain of the oxymuriate of mercury (corrosive sublimate) in each ounce of a mixture made of bitter almonds, the mercury being previously dissolved in a small quantity of rectified spirit. See P. 12, Class of Stimulants.

In that variety of the complaint which has been treated on the last, a cure is seldom accomplished; for, whether it originated in a strong hereditary predisposition, or from habitual intemperance, the difficulties in the way of correcting the habit of body are nearly insurmountable. It will, however, be important in both instances to pay a proper attention to diet, avoiding all salted meats and high-seasoned dishes, as likewise every heating kind of liquor. If the bowels are inactive and costive, they must be kept open by some cooling aperient medicine, such as a solution of the sulphate of magnesia or tartrate of potass. See P. 11 or 13, Class of Laxatives. Probably a slight course of alterative medicine, assisted by the patient's drinking a pint a day of the compound decoction of sarsaparilla, or one of the inner bark of elm (See P. 5, 12, and 14, Class of Alteratives) might be attended with advantage.

Persons afflicted with this species of blotched face are usually very anxious to have the complaint removed, and they fly to external applications, and not unfrequently employ very improper ones. As safe and good a wash as can be used is the following: Take of recti-

fied spirit, two ounces; rose or elder flower water, eight ounces; and the solution of the acetate of ammonia, half an ounce. Should this not be found to answer the desired intention, a trial may be made of the lotion composed of the bitter almond mixture, conjoined with the oxymuriate of mercury (see P. 12, Class of Stimulants), previously diluted with an equal quantity of elder flower water.

If the eruption strikes in suddenly from the use of any external application whatever, and the patient in consequence thereof experiences head-ache, impaired sight, or any other ill effect, the insertion of a seton in the neck, or issues in the neighbourhood of the head, or a perpetual blister, will become indispensibly necessary.

OF THE LEPROSY.

This disease is characterized by an eruption of spots of a copper colour over different parts of the body, a scaliness and glossiness of the skin, thickening of the lobes of the ears, hoarseness of the voice, offensiveness of the breath, falling off of the hair, and ulcers in various parts. The leprosy is seldom met with in our United Kingdom, but prevails much in some hot countries, particularly in Egypt, Africa, and the West Indies.

Symptoms.—It shows itself by the skin becoming rough, thick, and wrinkled, and having a glossy or unctuous appearance, together with numerous spots on the body of a yellow brown cast, or copper colour. At first they are to be observed chiefly on the forehead and chin; they afterwards increase in number as well as size, become rough, and have hard scales. The lobes of the ears after some time grow thick, the cheeks large and prominent, the face acquires a livid hue, the hair falls off, there is a numbness in the fingers and toes, the rest by night is disturbed, the voice is hoarse and nasal, and the breath becomes fetid and difficult.

As the disease advances in its progress, the parts affected crack into deep fissures, whilst the surrounding ones are knotty; then follow ulcers of a virulent kind, affecting the nostrils as also the hands and feet, which at last separate joint after joint. The body wastes and becomes a mass of putridity, until at length the vital powers are exhausted and the patient sinks.

Such is the nature and progress of the leprosy in warm climates, particularly among negroes, a race of people seemingly more liable to it than white people; but in northern climates, the disease appears under a much milder form, seeming to be merely a local complaint of the skin, and unattended by any severe symptoms, although usually of an obstinate nature.

Causes.—The leprosy most commonly is occasioned by infection; communicated either by cohabiting or otherwise coming in close contact, or possibly by drinking out of the same vessel, with those who labour under it in its advanced or ulcerative stage; but some nations, particularly the Egyptians, do not seem to con-

sider it in this light, for they do not seclude lepers from their society. My own knowledge of the disease, during a practice of nine years in the West Indies, has perfectly satisfied me that it is an infectious disease; and under the circumstances which I have pointed out may, and often is, communicated by a diseased person to a sound one. I am also of opinion that a predisposition or constitutional bias is frequently derived from the parents, and that the disease may be entailed in this way from one generation to another.

Leprosy, as it appears in northern climates, although very difficult to cure or remove wholly, is by no means attended with danger; but in warm climates it runs its course with rapidity, and when extensive ulcerations have ensued, never fails to destroy life in process of time.

Treatment and Regimen.—On the very first symptoms of leprosy being discovered, the patient should be prohibited the use of every kind of salted food, as well as fish, confining his diet in a great measure to vegetables and fruits, together with the other articles advised in the scurvy. The best liquors for common drink will be milk, infusions of malt, and spruce beer. During what is called crop time in the West Indies, cane juice liquor taken from the copper during the first process of making sugar, may be partaken of freely.

In the first stage of the disease it perhaps may be advantageous, besides strictly attending to regimen, to put the patient under a gentle alterative course of medicine, assisted by taking at the same time a pint a day of the compound decoction of sarsaparilla. See the Class of Alteratives, P. 5 or 9, as also P. 12. If the latter is not readily to be procured, a decoction of the inner fresh bark of the elm tree may be substituted in this country, and it is to be prepared in the following manner. Boil six ounces of the fresh bark, after being bruised, in two quarts of water over a slow fire, until the liquor is reduced to one quarter, then strain it. The dose should be from four ounces to half a pint twice or thrice a day.

To obviate the putrid tendency which prevails in leprosy, it would appear advisable, after a gentle course of alterative medicines, to administer some preparation of the Peruvian bark (See the Class of Antiseptics, P. 6) adding to each dose, from fifteen to twenty drops of diluted sulphuric acid, or any of the other mineral acids, as the muriatic or nitric in smaller doses.

A strict attention should be paid in the advanced stage of the disease to the ulcerations, by keeping them well cleansed, and washing them with a weak solution of soap, or with lime water of a tepid warmth, afterwards covering them with lint spread with calamine cerate.

In many of the West India Islands, springs of water strongly impregnated with sulphur are to be met with, and leprous patients who reside near such, should always avail themselves of the advantages to be derived from bathing in them, as well as drinking the water thereof.

The leprosy usually met with in Great Britain appears to be a local disease confined to the skin; and in most of those leprous patients who resort to the waters of Bath and Harrowgate, the stagnating humours appear to have acquired various degrees of acrimony, and to give a preternatural hardness and thickness to the skin. Alterative medicines, combined with antimony as before recommended, assisted by diet drinks (See P. 12, 13, 14, 15, 16, Class of Alteratives) and warm bathing, will greatly contribute to cleanse and soften the skin, by restoring a natural perspiration; and afterwards sea bathing, a milk diet, exercise, and the Peruvian bark, with some mineral acid to strengthen the body, will be the most appropriate mode of treatment.

Scabby or dry scaly eruptions on the skin, so often met with in practice, very much resemble the lighter species of leprosy, and are to be treated in the same manner; but they are apt to be confounded with scorbutic spots. Dipping a linen rag moistened in a diluted mixture of sulphuric acid with water, in the proportion of half a drachm of the former to one pint of the latter, will be found a good application in such cases of chronic eruption on the surface of the skin, after which they may be smeared, and dressed with a little of the compound sulphur ointment. Some have derived benefit from tar ointment, and when the eruption is not of considerable extent, weak mercurial ointment has occasionally been employed with advantage.

ENLARGED LEG, OR ELEPHANTIASIS.

This is a disease of the skin and cellular membrane of one or both of the lower extremities, giving to the limb or limbs a monstrous bulk as well as a hideous appearance, somewhat similar to the feet of an elephant; and it is from this circumstance that the complaint has derived its name.

By many writers it has been considered as a species of leprosy, and in some cases it puts on, beyond doubt, appearances somewhat of a similar nature; but it is defective in one of the principal characters of the latter disease, viz. it is not of an infectious nature, and is confined to the lower extremities; whereas in leprosy the whole habit or constitution becomes contaminated. Elephantiasis is a disease rarely met with in Great Britain, but is a very common one in the West Indies, particularly in the Island of Barbadoes. The inhabitants also of Cochin, situated on the coast of Malabar, are reported to be much afflicted with it, or one of a very similar nature.

Symptoms.—Occasionally elephantiasis makes its attack without much previous indisposition, but more usually the person is seized with pains in the head, back, and loins, cold shiverings, and a slight sickness at the stomach. There then ensues some degree of fever, accompanied by a sharp pain in the glands of the groin on the side affected, which after a short time become indurated, swelled, and in-

flamed ; and from thence a red line may be observed running down the thigh, following the course of the lymphatic vessels. No formation of matter or suppuration ever takes place, however, in the glands ; but as the inflammation extends, the fever usually abates, and after a few days' duration ceases altogether. In process of time it returns again, as well as the inflammation, leaving the leg at last very difficult to move, hardened, and much swelled, with a roughness and rigidness of the skin over the whole of the limb. Small scales are also formed on its surface, which do not fall off, but become enlarged and thickened, uneven lumps with deep fissures are formed, and at length the leg and foot acquire a considerable size and hideous appearance. In most cases the disease is confined to one limb, but occasionally both are affected ; this, however, is a rare occurrence. Except during the continuance of the febrile attacks, the general health of the patient is not materially deranged, but much inconvenience is experienced from the great bulk of the leg ; owing to this circumstance, some who have been thus afflicted, have been induced to submit to an amputation of the limb ; but in general their expectations have been frustrated, owing to the other leg and foot becoming diseased in the course of no great length of time.

Causes.—No satisfactory cause can be assigned as giving rise to the disease ; but some physicians have considered an exposure to cold as a very probable one, and others again have thought it may be occasioned by certain peculiarities in the water drank by the inhabitants of those places where it is so frequently met with. Possibly a predisposition to it is entailed by parents afflicted with it on their offspring, similar to what happens in leprosy, as also in goitre.

Treatment and Regimen.—The symptoms seldom run so high during the febrile attacks as to require a use of the lancet ; they may in general be moderated merely by opening the bowels freely by means of some purgative, such as three or four grains of the submuriate of mercury, mixed with a scruple or half a drachm of the powder of jalap. This step being taken, and the due effect produced, a gentle perspiration may be excited by medicines which determine the circulation to the surface of the body, as two grains of antimonial powder with three of camphor, made up into two pills with a little confection of roses, or else from eight to twelve grains of the compound powder of ipecacuanha mixed in a little warm gruel. Either of these may be administered towards bed-time. Three table-spoonsful of the saline mixture (See P. 5, Class of Antiphlogistics) may be taken every four hours throughout the day-time.

A proper attention ought to be paid at the same time to the limb wherein the complaint is seated, and to this flannel cloths wrung out in a warm decoction of chamomile flowers and bruised poppy heads may be frequently, if not constantly, kept applied. All unctuous or oily applications had best be avoided. If the skin over the surface of the body is dry and harsh, it may be advisable for the patient to make use of a warm bath occasionally.

Between the attacks of fever, it will be right to try the effects of an alterative course of medicine, assisted by an appropriate diet drink as prescribed in the treatment of leprosy, as likewise warm bathing. The tumid, rough, and rugged parts of the limb should be washed three or four times a week with tepid water and soap, then be covered with adhesive plaster, and over all a calico bandage be applied very smooth, and at first without much tightness or pressure.

Throughout every stage of the disease the bowels should be kept open, and when not naturally so, some gentle aperient (see P. 9, Class of Laxatives,) must be given from time to time.

The diet in elephantiasis should consist chiefly of vegetable productions and fruits, as in leprosy, carefully abstaining from all salted meats. The drink may be spruce beer, infusions of malt worked with yeast, milk, &c.

OF THE YAWS.

This disease is endemial to the Antilla Islands and the coast of Africa, and I believe, is pretty much confined to negroes; as, during a practice of nine years in the West Indies, I never saw a white person who laboured under it. It appears, however, that a disorder of a very similar nature, if not really the same, some time ago was observed in the West of Scotland, where it was known under the name of Sibbens or Sivvens, and was supposed to have been brought there by the crew of a West India vessel that had been to Africa, and that was wrecked on the coast of Wigton, in Cumberland, some of the seamen of which were saved and hospitably received into the houses of those who resided near the spot; for very soon afterwards, the disease was communicated to the inhabitants, and became frequent. From this occurrence it would appear that black people are not alone subject to the yaws. The disease is characterized by excrescences of the size and appearance of a raspberry or mulberry, growing out of the skin on various parts of the body, which discharge a thin acrimonious fluid.

Symptoms.—Previous to the appearance of the eruptions, the patient usually experiences pains in the limbs, particularly round the joints, and somewhat alike to those of rheumatism; which pains continue perhaps for many days, and are accompanied by languor and debility. At length some degree of fever comes on, preceded by chilly fits; but in many cases it is of so slight a nature as hardly to be noticed.

In general, however, the eruptions are preceded by a loss of appetite, slight head-ache and pains, which are usually increased towards the approach of night, and these symptoms continue for a few days. An eruption of pustules, more or less numerous, then takes place in various parts of the body, particularly the face, neck, arm pits, groins, organs of generation, and round the fundament. The eruptions do not shew themselves at one period as in the small

pox; but whilst one crop is withering a fresh one makes its appearance in other places. At first the pimples are about the size of the head of a large pin, but they gradually extend to that of a sixpence or shilling. The pustules contain an opaque whitish fluid, and when they break, a viscid matter is discharged, which forms a thick and irregular scab or crust on their surface. From the largest pustules, fungous excrescences of various sizes and form, nearly resembling a raspberry or mulberry in appearance, and like these having a granulated surface, arise. These never suppurate kindly; but discharge a glutinous fluid, which forms into an ugly scab or crust round the edge of the excrescence, and covers the upper part of it, when much elevated, with a white slough. The hair on the parts of the body where the eruptions are, becomes from a black to a white colour.

In some cases, the excrescences arrive at their full size and maturity in the space of four or five weeks; but in others, two or three months elapse before this happens, from which it may be inferred that the duration of the yaws is very uncertain. In general, the number and size of the pustules are in proportion to the degree of the eruptive fever.

When the disease has attained its height, one of the pustules usually becomes much larger than the rest, equalling the size of a half crown piece perhaps; it puts on the appearance of an ulcer, and is somewhat depressed on its surface, instead of being elevated like the others above the skin. It has a foul and sloughy aspect, and discharges an acrimonious matter, which corrodes the surrounding skin, and when near a bone, and proper attention is not paid to wash away the matter, is apt to occasion a caries, or diseased state of it. This large pustule is known by the appellation of the master or mother yaw.

The soles of the feet are sometimes the seat of the yaws, and then, owing to the thickness of the skin which covers these parts, they are prevented from rising through it: these give the person much pain, and disable him from walking. Sometimes a great part of the bottom of the foot or feet is thus occupied: at others not above the space of a shilling piece, and, like corns, are apt to be affected by the approach of wet and damp weather. The negroes call these yaws, tubba or crab yaws.

The yaws never affect the same person a second time, and the disease seems generally to arise from infection. Like the small pox, it may be communicated by inoculation, and might probably be rendered a milder disease thereby; but it has not been attempted, owing, I presume, to its requiring some months to go through its course.

The yaws frequently proves both tedious and difficult to cure, and is a very loathsome complaint, but is seldom attended with immediate danger. Where the eruptions have been repelled into the system by external applications, or too early recourse has been had to mercury, the cure is often greatly protracted, and in some

cases rendered even uncertain. If the disease is neglected, and suffered to pursue its course unrestrained by medicine, foul ulcers are very apt to be formed, and these undermine the constitution, and occasion a rottenness of the bones, similar to what happens in the confirmed venereal disorder, under the like circumstances.

Treatment and Regimen.—During the first or eruptive stage of the disease, nature should be assisted in bringing out the eruptions kindly; for which purpose, the sublimed sulphur may either be given by itself, in doses of a scruple or half a drachm repeated night and morning, or be mixed in the like quantity with two grains of antimonial powder, and ten of that of gum guaiacum, washing them down with a decoction of the woods, such as sarsaparilla, &c. See the Class of Alteratives, P. 12 and 13. If the patient can, at the same time, enjoy the advantages of a warm bath, he should avail himself thereof twice or thrice a week. Care must be taken that he is warmly and comfortably lodged, that he is liberally supplied with a sufficiency of nutritive food, that he uses regular exercise daily, and that he is removed to a proper distance from the other negroes who have never had the disease; for, as before observed, it may readily be communicated by cohabitation, or coming in close contact with those who labour under it.

As soon as the eruptions have attained their full maturity, and begin to look dry (the time they will take to do this being uncertain), it will then be necessary to give some mild preparation of mercury, (See the Class of Alteratives, P. 4, 5, or 9,) and this course ought to be continued until the scabs are dry and fall off; but should the salivary glands and mouth shew the mercurial influence, by a discharge of spittle or great tenderness in the gums, the further use of mercury should be suspended for a time, and then be recommenced in smaller doses.

During the mercurial course, the bowels, if inclinable to be costive, should be kept open by some mild laxative medicine (See this Class), but after it has been discontinued wholly, it will be prudent to give two or three doses of some purgative (See this Class P. 1 or 4), allowing three or four days to intervene between each.

The best application to the large or master yaw, as it is termed, and which remains after all the rest have disappeared, is an ointment composed of the carbonate of iron and prepared lard, in the proportion of two drachms of the former to one ounce of the latter, adding also a little fresh lemon juice. Should this not produce the desired effect, we may substitute the ointment of nitric oxyd of mercury, which is a good stimulant, and escharotic in cases of foul indolent ulcers.

When the yaws occupy the soles of the feet, it is a long time before they break through the skin, and when they do, they frequently are difficult to heal, and sometimes the whole sole becomes ulcerated. In such cases, the negroes generally feel most relief by applying a poultice of the fresh cassava root, rasped very fine. The

hard swellings which likewise occupy the soles of the feet, but which do not suppurate, are only to be got rid of by frequently immersing the feet in warm water, afterwards paring away the hardened skin, and gently cauterizing the part; by which means a sore is produced that may be readily healed by dressing it with a little of the nitric oxyd of mercury, as before mentioned.

OF THE VENEREAL DISEASE.

This disease shows itself under different forms, according as it happens to be a mere local affection, or a constitutional one: if under the former, the patient is attacked with a discharge of matter from the parts of generation, passing under the appellation of a gonorrhœa or clap, or with a small ulcer or ulcers on the same parts, called chancres; but if under a constitutional form, then the skin is beset with copper-coloured spots, the tonsils, uvula, and palate, become ulcerated, the eyes are affected with obstinate inflammation, nocturnal pains are experienced, a loss of strength and flesh ensues, and a small fever of the hectic kind arises. This form of the disease is termed a confirmed pox or lues.

Between these two forms of the venereal disease, there often however arises a kind of intermediate state, and owing to an absorption of the infectious matter from the parts to which it has been applied, the glands in one or both groins become indurated, swelled, and inflamed, constituting that affection known by the name of bubo.

These several affections or forms of the disease may be produced, I am of opinion, by one and the same virus or poison; and I also think, that the event depends wholly on the state of the parts, the constitution of the patient, and other accidental circumstances at the time that the infection is communicated, and not on any difference in the nature of the matter secreted in the one or other affection. Some modern practitioners of eminence entertain, however, sentiments perfectly in opposition to those of mine on this subject; for they consider gonorrhœa and lues as arising from different specific contagions.

It is probable, I think, that when an infected person forms a connexion with another who is free from it, but who happens to have any little excoriation, ulcer, or wound about the parts of generation at the time, if infection is communicated from the one to the other, it will be most likely to appear under the form of a constitutional affection or lues, the matter so applied being then readily absorbed into the system, in a manner similar to what happens in inoculation for the small pox or vaccine disease; whereas if it is applied to a surface covered with a mucous membrane, which is not abraded and without a wound, or to a part of a spongy texture, then the probable consequence will be either a gonorrhœa or chancre.

OF A CLAP OR VIRULENT GONORRHŒA.

Symptoms.—In a clap there is always a discharge of an infectious matter from the parts of generation. The disease manifests itself from the fourth day to the tenth after the infection has been conveyed, although in a few instances two or three weeks have intervened, and usually begins in men with an itching in the glans or nut of the penis, and tingling sensation along the whole course of the urinary canal or urethra ; shortly after which, the person feels some degree of heat or scalding in making water, and a slight discharge of white mucous matter.

In the course of a day or two more, the inflammation having increased, the orifice of the urethra frequently becomes excoriated, the heat in voiding urine is considerably greater than at first, the stream is smaller than usual, and the discharge from a white is converted into a yellow or greenish colour, and is much more copious. From the inflammation becoming extensive, and prevailing in a considerable degree, the penis is attacked with severe pains, especially on any erection, and is bent forcibly downwards ; and this symptom occurs most frequently, and is most troublesome during the night, when the person is warm in bed. This constitutes what is called a chordéé.

In consequence of inflammation it sometimes happens that the prepuce becomes so swelled and contracted at the end, that it cannot be drawn back, forming what is called by professional men a phymosis ; or that being drawn backwards behind the glans of the penis, it cannot be again brought forward, which goes by the name of paraphymosis. Occasionally a small blood vessel becomes ruptured, and then a little blood is voided at the time of making water. The patient becomes incapable of retaining his urine for any great space of time, has a frequent desire to void it, and feels much pain and uneasiness in evacuating it. In some cases the glands in the groin become enlarged and indurated, or perhaps one of the testicles swells and inflames, giving rise to excruciating pains extending from the part affected up into the back, together with restlessness, heat, and a slight degree of fever.

Should the inflammation extending along the urethra be very great, and this be communicated to the bladder itself, its mucous membrane is apt to become affected thereby, and to pour out a considerable quantity of purulent matter and mucus mixed together, which gives to the urine on being voided the appearance of whey, or perhaps a great difficulty in voiding it, or a suppression takes place in consequence of the neck of the bladder being much inflamed.

A risk arising from the inflammation having been extensive and severe in the urethra, particularly if a gonorrhœa has been of frequent recurrence, is the formation of one or more strictures in the urethra ; and when this is the case, there is not only a considerable

difficulty in making water, but it either splits into two streams, or is voided somewhat in the curved form of a corkscrew.

If the patient has led a life of temperance, and not neglected a clap at its commencement, the discharge having been thin and discoloured at first, will, in the course of two or three weeks, become thick, white, and of a ropy consistence, and from having gradually diminished in quantity, will at last cease entirely, together with every other unpleasant symptom; but when he has neglected it by not adopting proper means, or has led a life of intemperance, it will then sometimes continue for several weeks, nay months, occasioning local weakness and debility in the mucous glands of the urethra, and giving rise to a gleet, or discharge of mucus arising from local weakness.

A more serious consequence, however, of repeated inflammation from recurrences of a gonorrhœa in men, is the formation of one or more strictures in the urethra, which so block it up as greatly to interfere with the urine being voided with ease or in an uninterrupted stream, and occasionally induce a total suppression of it.

Owing to a neglect of proper cleanliness during the continuance of gonorrhœa, warty excrescences sometimes form about the parts of generation in both sexes, which prove very troublesome.

Women labouring under a gonorrhœa are incommoded by a heat and scalding in making water, with the discharge of a discoloured mucous matter, and a slight pain in walking, and uneasiness in sitting; but they are free from many of the unpleasant symptoms to which men are subject, as the external organs of generation are less complex in them than in males; and moreover they are seldom, if ever, afflicted with strictures, owing to the female urethra being much shorter, and without any curve in it. It is, however, not uncommon with them to find an aggravation of the symptoms immediately after menstruation.

Virulent gonorrhœa may readily be distinguished from either a gleet or the whites to which some women are subject, by the swelling and dilatation of the orifice of the urethra; by the scalding and frequent desire of making water; and in general by the nature of the discharge. The chordéé in men will enable the patient to distinguish it from a simple gleet or mucous discharge.

Treatment and Regimen.—As soon as a person becomes sensible that infection has been conveyed to him, he should refrain from every thing of a stimulating and heating quality, such as high-seasoned meats or spices, as likewise all vinous and spirituous liquors. His food should be light and cooling, consisting of plain meats of easy digestion, broths, puddings, milk and bread, vegetables, gruel, ripe fruits, &c.; and his drink be barley water, linseed tea, decoctions of marsh-mallows, whey, or milk and water, with a little gum acacia dissolved in it. Every kind of excess ought to be carefully avoided, as well as every species of severe exercise, particularly

on horseback, and the patient should carefully guard against any exposure to cold, or any sudden stoppage of the running, lest a swelling of one or both testicles should ensue.

It will be advisable in every case of gonorrhœa to take immediately on the first discovery of any of the symptoms one or two doses of some cooling purgative, (see the Class of Laxatives, P. 6, 11, 12, or 13,) injecting at the same time up the urethra, some mild wash of a sedative nature, such as any of those inserted under the head of the Class of Sedatives, five or six times a day, drinking freely at the same time of mucilaginous diluting liquors as before mentioned, observing a spare regimen and abstinence from vinous and spirituous liquors, and avoiding active exercise. Should the patient be of a full plethoric habit, and the inflammatory symptoms run very high at the commencement, with great heat and scalding in voiding urine, it may then be advisable for him to be bled to the extent of six or eight ounces.

As soon as the inflammatory symptoms have abated, we may with safety lay aside the sedative injections, and employ others of a mild astringent nature (see the Class of Astringents, P. 17, 18, 19, or 21); but, perhaps, none can be more appropriate, or be used with greater benefit, than a solution of the sulphate of zinc in rose water, in the proportion of two grains of the former to each ounce of the latter.

In those cases where there is reason to suspect that there are ulcerations in the urethra, it will be advisable to employ mercurial injections, and these will seldom fail to lessen the discharge, ease the heat in making water, and relieve the other symptoms of disorder. The following may be used: rub fifteen grains of the submuriate of mercury (calomel) in a mortar, with one ounce and a half of thin mucilage of gum acacia, until they are well blended together; then add by degrees five ounces of rose water and one of lime water. Throw up the urethra one or two syringes full of this injection three or four times a day. In employing injections of any kind, particularly astringent ones, it will always be best to begin with those of a weak nature, lest a swelled testicle should be induced by too sudden a check being given to the running. In such cases, if the inflammatory symptoms run high, the patient may either be bled in the arm, or have several leeches applied over the part affected, encouraging a discharge of blood from the wounds after they drop off, by dabbing them frequently with a sponge dipped in warm water. As soon as the bleeding ceases, the testicles must be suspended, so as to prevent their hanging by their own weight; and the patient should be kept quiet, and be placed in a recumbent position, either in bed or on a couch. He should also immediately take some aperient medicine to open his bowels properly (see the Class of Purgatives, P. 1, 3, or 4), and this ought to be repeated every other day, until the swelling and inflammation in the testicle have subsided. To assist in effecting this, the parts, besides being kept properly suspended, may be con-

stantly moistened with linen rags wetted in some discutient wash, such as either P. 1, 2, or 3 of this Class. This mode of proceeding will be preferable in most cases to fomenting the parts with any thing warm. Should the pain be very great, however, we can make a trial not only of warm anodyne fomentations, consisting of a decoction of bruised poppy heads, several times a day; but likewise give small doses of opium morning and night. See the Class of Anodynes, P. 2.

If the complaint is obstinate, and resists the means which have been pointed out in addition to a very spare regimen, and total abstinence from all spirituous, vinous, or other fermented liquors, it then will be advisable to try the effects of an emetic, and to repeat this again in a day or two; such vomiting having sometimes removed a swelling of the testicle after a failure of bleedings, purgatives, and discutient lotions. The best emetic will be sulphate of copper combined with ipecacuanha. See the Class of Emetics, P. 6.

Should the patient be very feverish, his skin dry, and thirst considerable, on the first taking place of the swelling and inflammation, or during its further progress, it may be advisable, besides keeping his bowels sufficiently open by laxative medicines, to give him a couple of table-spoonsful of the saline mixture with nitrate of potash dissolved in it, (see the Class of Antiphlogistics, P. 4,) every three or four hours.

Phymosis and paraphymosis (the nature of which have already been explained) occasionally attend on a gonorrhœa. In all such cases, it will be necessary, if the inflammation runs high, to draw blood from the arm, proportioning the quantity taken away to the urgency of the case as well as the habit of body; then to open the bowels freely by purgatives, and apply emollient fomentations and poultices to the parts, the patient being kept at the same time in an horizontal position, if convenient; but, if not, he should support the penis by a proper bandage up to the belly. Besides fomenting the parts affected, it will be proper to inject a little tepid milk and water, twice a day, in all cases of phymosis, between the prepuce and nut of the penis, for the purpose of washing off any matter which may have lodged there, and which, by neglect, might occasion excoriation or ulceration.

Where there is any danger of a mortification of the parts, in consequence of the inflamed and strictured state of the prepuce, there then will be no other way of affording relief than by calling in the aid of a surgeon to divide the constricted part: if necessary, circumcision must be performed, so as to free the glans penis wholly from confinement. Should the division of the constricted part have been delayed too long, and gangrene have already taken place, the parts must be well fomented with a stong decoction of bark, and a drachm of the powder of the same bark, with twenty drops of diluted sulphuric acid, be taken every two or three hours, mixed in a glass of Port or other wine, a very generous diet being

at the same time allowed. After fomenting the parts, a cataplasm of linseed meal and an infusion of malt and fresh yeast (see the Class of Antiseptics, P. 14), may be applied, taking care to renew it about thrice a day.

If that distressing and painful symptom, a chordéé, makes its appearance in the course of a gonorrhœa, it will be advisable for the patient to take an anodyne draught at bed-time, composed of one ounce and a half of camphor mixture with forty or fifty drops of tincture of opium; and at the time of the attack to immerse the penis in cold water.

In severe cases of gonorrhœa, and where the patient has not submitted to the proper abstinence from stimulant liquors and food, the inflammation is apt to extend to the neck of the bladder, and produce a frequent desire to make water, but without the ability to void it; it comes away drop by drop, or perhaps is wholly suppressed. In such cases, the means advised under the head of a Difficulty and Suppression of Urine (see these diseases) must be resorted to, and be persevered in until the urine is voided with greater ease and freedom. Should the inner coat or mucous membrane of the bladder pour out purulent matter mixed with mucus, in consequence of the inflammation having extended to it, giving to the urine when voided an appearance of whey, the best medicine for the patient to take is the uva ursi (red berried trailing wortle berry) in doses of a scruple or half a drachm thrice a day. If he can at the same time obtain surgical assistance, and have the bladder injected twice in the twenty-four hours with four or five ounces of simple tepid water each time, it will be likely to assist the effect of the medicine very essentially.

When warty excrescences arise on the parts of generation, as sometimes happens in gonorrhœa, they may either be sprinkled with a little of the powder of savin, or be daily touched with lunar caustic, or in other words, the nitrate of silver.

Certain parts of the urethra are apt to become narrowed from previous inflammation, and (as has already has been observed) to have one or more strictures formed in the canal, which greatly interfere with the urine being discharged readily and in a proper stream, and these by not being attended to in due time, are apt to give rise to a total suppression. A regular and long continued use of a bougie, consisting either of linen cloth dipped in wax and oil, and made of a proper form and smooth surface, or of elastic gum, is the means generally resorted to in common cases of this nature; but in strictures which are nearly impervious, or so contracted as to be incapable of dilatation, the aid of an expert surgeon will be required to destroy the stricture, by passing a few times a bougie armed with caustic. This is, however, a remedy only to be resorted to when the other bougies have failed to produce a sufficient and permanent dilatation of the contracted part. It should be employed only as the final resource, even by surgeons.

In using the common bougies, the following rules should be pro-

perly attended to. The patient should always begin with one of a moderate size, and previous to his introducing it into the urethra, he should soften it a little, either by grasping it with his hands for a due length of time, or by holding it near the fire, then giving it a gentle bend towards the extremity and oiling it, that it may pass with greater facility, if the stricture is seated far down the urethra. He should employ no force in its introduction; and when he meets with resistance, he must be content with suffering the point of the bougie to press moderately against the stricture for a short time each day, so as gradually to dilate the contracted part. At first, he should retain it in the passage for only about half an hour each time, gradually increasing its duration as the parts bear it without much inconvenience or irritation. He is to guard against its slipping into the bladder, by passing a bit of small twine round the upper end of it, and tying the ends of it to the penis. He is to avoid all exercise during the time it is introduced, and he should continue using it for some length of time after the stricture has been overcome, having timely recourse to the remedy again whenever he perceives the least return of any obstruction to the free discharge of the urine.

Under proper self-control and due management, most cases of gonorrhœa will soon give way to a use of laxative medicines and mild injections of an astringent nature in the manner already pointed out; for it may be considered as a local complaint, not usually requiring the aid of mercury; but to guard against after consequences, particularly where the disease has made its attack with severity, or has been of some continuance, I would recommend as soon as the inflammatory symptoms have subsided, for the patient to make a moderate use of it. He may take a pill of the submuriate of mercury, or the common quicksilver one, (see the Class of Alteratives, P. 7 or 8,) conjoined with opium, every night and morning, until he perceives a tenderness in his gums, or a disposition to an increased flow of spittle in the mouth, when he should stop for a few days, and then recommence again, taking only one pill in the course of the twenty-four hours. It will be desirable that a gentle evident effect be thus produced, and kept up for a fortnight or three weeks, when, most probable, every symptom will be removed; and during this course the patient should go warmly clothed, avoid all exposure to wet or a damp atmosphere, and lead a life of temperance.

It very frequently happens, that after all infection is destroyed, and the complaint may be said to be cured, a slight weeping from the parts or gleet remains behind, which continues very obstinate, owing to local relaxation. In all such cases, in addition to a continuation of astringent injections, the patient may take a tea spoonful of the balsam copaiba, or else Canada turpentine, mixed up with a little white sugar, twice or thrice a day, making use at the same time of a topical cold bath to the parts, by means of a large sponge dipped in cold water contained either in a basin or bidet.

Should these means not put a stop to the gleet, the more general remedy of a cold bath may be substituted, if the season of the year will admit of its use, the patient at the same time entering on a course of the Peruvian bark and chalybeates, (see the Class of Tonics,) together with a generous nourishing diet, and a moderate quantity of wine daily.

A gleet sometimes, however, is occasioned by one or more strictures in the urethra; and when this is the case, will only yield to the use of bougies employed in the manner and with the precautions before pointed out.

OF CHANCRES.

These are superficial corrosive ulcers, which arise in consequence of a venereal infection, and occupy the private parts in both sexes.

In men they are generally seated on the nut of the penis and inside of the prepuce; and in women on the external and internal organs of generation. Nurses who suckle children that have become infected during the birth, are apt to have chancres on or about their nipples, and these excite much pain.

In general, chancres appear at first like little red pimples, which are succeeded by small pustules filled with a transparent fluid; these break and form little spreading ulcers, which are very sore and painful, have prominent edges of an ash colour, and are unequal at the bottom, showing no disposition whatever to heal when left to themselves, but on the contrary, to spread much. The period at which chancres make their appearance after infection has been communicated is various, as sometimes they manifest themselves in six or seven days, and in others not until a fortnight or three weeks have elapsed. Sometimes there is only a single ulcer, at others two or three take place.

In all cases of chancres, a strict attention must be paid to cleanliness, by frequently washing away the matter discharged from the sores by means of warm milk and water, then with a weak solution of corrosive sublimate in water (say four grains of the former to six ounces of the latter), adding about ten grains of the muriate of ammonia to expedite and assist the solution of the sublimate, and afterwards dressing with a little fine lint spread with the ointment of the nitrate of mercury, or with one composed of one ounce of spermaceti cerate mixed with fifteen grains of red precipitate. The patient must also take a dose or two of some purgative, (see this Class, P. 1 or 3,) and then commence a gentle mercurial course either by taking a quicksilver pill, or one of the submuriate of mercury, joined with opium, every night and morning (See the Class of Alteratives, P. 7 and 8), or by rubbing in a drachm of the strong mercurial ointment on the thighs and legs every night, in the manner proposed under the head of a Virulent Gonorrhœa; the patient at the same time guarding

against the vicissitudes of the weather, clothing himself warmly, and abstaining from heating and intoxicating liquors.

If a chancre resists all these means, internal as well as external, the parts occupied by it may be exposed morning and night to the fumes of the red sulphuret of mercury thrown on a heated iron. A very obstinate case of chancre, which had long remained unsubdued by every means which had been employed, was soon cured under my instructions, by treating it in the above manner.

Chancres occasionally become malignant, owing to some peculiarity in the person's constitution, or an excessive use of mercury. The part assumes a livid redness, succeeded speedily by ulceration, which extends considerably and penetrates deeply. The ulcer puts on a corroding appearance, discharges a great quantity of matter, and is highly painful. Under such an occurrence, the use of mercury either internally or externally must be discontinued, and the parts be well fomented morning and evening with flannel cloths wrung out in a strong decoction of the Peruvian bark and bruised poppy heads, afterwards applying an emollient poultice. Some preparation of the bark may also be given internally, joined with a mineral acid and sarsaparilla, in the following manner: Take two ounces of the decoction of the latter, half a drachm of the powder of bark, and twenty-five drops of diluted nitric acid, as a draught, every four hours. If the air of the patient's abode is impure, he should remove to a purer atmosphere; and to give energy to the system, and thereby promote a healthy granulation in the ulcerated parts, a nutritive and generous diet, with a moderate quantity of wine, ought to be allowed.

When chancres exist along with phymosis, the prepuce should be divided, to allow proper applications to be made to the ulcers.

OF BUBOES.

These rarely happen any where but in the groin, but occasionally they are seated in the arm pits, owing to infection having been conveyed to the midwife during the delivery of a woman labouring under a venereal taint through the medium of some scratch or wound on the fingers or hand.

A bubo manifests itself with a pain in the groin, as well as by a slight swelling and hardness, and these continuing to increase daily, it at length acquires a considerable size: there is a throbbing in the tumour, with a redness of the skin over it, and the patient experiences pain and some difficulty in walking. In some cases it goes on rapidly to suppuration, and the formation of matter within it; in others it proceeds very slowly, and occasionally it remains for some days in an indolent state, and at length disperses without suppurating.

It will always be best to disperse a bubo if no tendency to suppuration has as yet manifested itself; but if it is already commenc-

ed, then the suppuration should be expedited and promoted by adopting proper means.

To disperse a bubo, it will be advisable to apply six or eight leeches round the tumour soon after it has appeared, encouraging the flow of blood from the wounds after they drop off, by wetting them from time to time with a linen rag wrung out in hot water. The patient's bowels should next be well evacuated, by means of some purgative, (see this Class, P. 1, 3, or 4,) and this be repeated every other day as long as there is any prospect of dispersing the swelling. A very spare diet is at the same time to be used, and all exercise carefully avoided.

After the bleeding occasioned by the leeches has ceased, a pledget of soft linen wetted in some discutient wash (see the Class of Discutients, P. 1, 2, or 3,) should be kept constantly applied throughout the day, taking care to re-wet it as often as it becomes dry and hot, and during the night we may substitute a poultice of linseed meal or one of rye, sufficiently moistened with a diluted solution of the acetate of lead, and this is to be applied cold.

To assist the effect of these remedies, the patient, previous to his going to bed, should rub in assiduously about half a drachm of the strong mercurial ointment every night into the thighs and legs, particularly on that side where the bubo is situated. This course ought to be continued until after the disappearance of the swelling and induration, unless any considerable degree of salivation or discharge of spittle ensues previous thereto, in which case, the use of the ointment may be discontinued for a day or two, and the body be kept open in the mean time by some laxative medicine, (See the Class of Laxatives, P. 11), washing the mouth and throat frequently with some proper gargle. See the Class of Astringents, P. 13 or 14. But if the external use of mercury produces no effect on the patient's mouth, nor on the tumour, it then will be advisable for him to employ it also internally, and he may take one of the quicksilver pills (vulgarly called the blue pill) every night, or if requisite, night and morning.

Should the bubo become inflamed, instead of dispersing, and show evident appearances of a suppuration having commenced, then, together with the use of mercury internally, or applied externally, as shall seem best adapted to the patient's constitution and situation, an emollient poultice of bread, milk, and lard, must be applied, and be renewed every night and morning until the tumour becomes perfectly soft. As soon as this happens, it should be opened with a lancet, or by the application of the common caustic, which will be preferable to suffering it to break spontaneously. As soon as the matter contained in the tumour is discharged, the wound may be dressed with dry lint and resinous ointment. If fungous granulations (proud flesh) spring up above the surface of the wound, they should be sprinkled with a little red precipitate occasionally; or should the edges become callous or indurated, and be prominent above the surface, they may be touched at each time of dressing with a little of the sulphate of copper.

In scrofulous habits it sometimes happens that a bubo does not heal kindly, but on the contrary, spreads from the glands to the cellular substances, and greatly affects the contiguous parts, assuming a foul spongy appearance, and discharging a highly acrid matter, being at the same time accompanied by much pain; or should the ulceration heal in one part, another soon becomes affected. In such cases, the ulcerated parts should be fomented twice or thrice a day, with a decoction of poppy heads and the leaves of hemlock bruised, afterwards applying a cold poultice of linseed meal, moistened with a diluted solution of the acetate of lead. We may, at the same time, give an opiate pill or draught (See the Class of Anodynes, P. 1 or 5), every night to allay pain and irritation, and throughout the day-time, some of the preparations of the Peruvian bark (See the Class of Tonics, P. 1, 2, 9, or 14), joined with a few drops of the diluted nitric acid.

In all cases of bubo where the patient is under a mercurial course, he should be warmly clothed, carefully avoid all exposures to wet or a moist atmosphere, and abstain from food of a high-seasoned nature, as well as from all kinds of spirituous liquors. If he will also abstain from vinous and fermented ones, so much the better.

OF A CONSTITUTIONAL AFFECTION.

The disease is termed a confirmed pox or lues when the venereal poison is absorbed into the general habit or system from whatever cause, be it neglect, improper management, or previous ulceration.

Symptoms.—When the venereal poison gets into the system by absorption, some symptoms will frequently manifest themselves in the course of seven or eight weeks, or perhaps sooner; but how long the virus may lurk in the body after it has been absorbed into the mass of blood before it produces any obvious effects, is very uncertain. The constitution being affected by the poison, the disease shews itself under a variety of shapes, and occasions various local effects in different parts of the body, which variety is probably owing to the particular part to which the poison is first applied, or to the difference of the habit and constitution of the person who receives the infection.

The first symptoms are usually brown or copper-coloured spots, dispersed over different parts of the body; then come on nocturnal pains, affecting the shins, bones of the arms and head, ulcerations of the tonsils, palate, and other parts of the throat, giving rise to a hoarseness in the voice, and some difficulty in swallowing, which appearances are succeeded by an obstinate inflammation of the eyes and eye-lids; and if the virus falls on deep-seated parts, such as the ligaments and membrane immediately enveloping the bones, then hard painful swellings arise thereon, termed nodes.

If the disease is suffered to go on unattended to, the spots or

blotches will soon have a thick scale or scurf formed on their tops, which falling off after a time, is succeeded by another, and this at length casting off deep, gives rise to several ulcers which discharge an acrid matter. The bones at length become diseased, and if the throat continues ulcerated, the disease creeps towards the nose, and this is corroded away. The countenance puts on a pale and dejected aspect, the body wastes and emaciates, the patient is deprived of rest by the severity of the pains when in bed, and he at last is attacked with atrophy, and falls a martyr to the disease.

Cause.—The disease in question always arises from the poison being absorbed, and then circulating in the mass of fluids, and it may be communicated in any of the following ways. Either by the connexion of a healthy person with one who is diseased; by exposing to the contact of the poison any part of the surface of the body, which is lined with a mucous membrane, as by kissing, &c. especially if the parts so exposed, have been previously excoriated, wounded, or ulcerated by any cause whatever; by giving suck, in which case the nipples of the wet nurse may be infected by venereal ulcers in the mouth of the child: on the contrary, the nipples of the nurse being infected, will occasion venereal ulcers in the child's mouth, lips, or nose; and lastly, the poison may be communicated by wounding any part of the body with a lancet or knife infected with the venereal poison, similar to what happens in the inoculated small pox and vaccine disease.

It may be necessary to distinguish venereal blotches and ulcers from scorbutic ones, which may readily be done for the most part, by observing that venereal ulcers frequently spread to the nose, scorbutic ones never do so; venereal ulcers have callous edges, scorbutic ones not so; venereal ulcers are commonly circular and circumscribed, at least they are confined to certain places, whilst scorbutic ones are of a more irregular figure, spread wider, and frequently affect the gums and whole of the mouth; venereal ulcers are in general hollow, and covered at the bottom with a yellowish or white slough, but scorbutic ones are apt to rise up in loose and fungous prominences; venereal ulcers are red in their circumference, and not unfrequently destroy the subjacent bones; whereas scorbutic ones seldom, if ever, do this, and are always livid. Lastly, venereal ulcers are generally combined with other symptoms, which are known to be venereal; scorbutic ones with those which are characteristic of scurvy.

Where a confirmed lues has been of long standing, and is accompained by many of the severe symptoms which have before been enumerated, the cure will prove tedious, and in many cases uncertain, as the strength and constitution of the patient may not admit of his going through that course of medicine which may be requisite to destroy the poison; but if the disorder is recent, and the constitution otherwise good, a perfect cure may be effected under proper treatment and due temperance.

Treatment and Regimen.—The only specific remedy on which a

reliance should be placed for the cure of a confirmed pox or lues, is mercury; and this may be introduced into the system, either by giving some active preparation of it by the mouth, or by applying it externally in the form of unction. There are some persons, however, but little affected by an internal use of mercury; as the medicine, even although combined with opium, is apt with them to pass off by stool, occasioning griping pains and sickness, producing little other effect on the constitution and none on the disease; and there are others again, whose absorbent vessels will not take up this mineral very readily when applied externally in the form of unction. Mercury ought therefore to be employed in the manner which is most suitable to the constitution of the patient.

If he can conveniently use mercurial ointment, and it is found to act sufficiently upon the disease and constitution, this mode of introducing the specific into the habit should be preferred. One drachm of the strong ointment may be rubbed into the inside of the thighs and legs every night, continuing it as long as the symptoms seem to require its use, or according to the effect it produces.

Should the patient's convenience or his constitution prevent him from using the ointment, he must substitute the internal use of mercury. There is, perhaps, no preparation of it preferable to the common quicksilver pill, one of which should be taken every night and morning. If it fails in producing the desired effect, or runs off by stool, an addition of half a grain of opium may be made to each pill, or the following be substituted: Mix twenty-four grains of the submuriate of mercury (calomel), six of opium, and half a drachm of the crumb of bread, together with a little syrup, and out of the mass form twelve pills, of which one is to be taken night and morning. This course must be persisted in as long as the symptoms continue, or what will be still more advisable, even for a week or ten days after they are removed,

To use mercury either externally, or internally, so as to occasion any great degree of salivation or discharge of spittle, will in most cases be unnecessary; nay, it may prove prejudicial, and render the disease of more tedious cure; and, therefore, if the patient finds such an occurrence likely to take place, either from a use of the ointment or the pills, he should desist for a few days, and when the spitting is greatly abated, re-assume whatever course he had previously adopted. The quantity or dose may also be diminished if the effects produced are greater than what are desirable. It will always be best to use mercury so as to produce an evident effect on the mouth and a tendency to salivation, without carrying this much further, and to keep it at this point during the whole course of the cure.

To assist the powers of mercury, it will be advisable for the patient to drink a pint each day of the compound decoction of sarsaparilla (See the Class of Alteratives, P. 12,) or even of the simple decoction, P. 13. During the mercurial course, he must be warmly clothed, wearing flannel next to the skin, and carefully abstain from

all spirituous liquors and vegetable acids, as also from salted and high-seasoned meats, confining his diet to animal food of light digestion, thin broths, preparations of arrow root, sago, barley, rice, light puddings, vegetables, and ripe fruits.

It may be necessary during the mercurial course to pay attention to particular symptoms as they occur. If there are external ulcerations, these may be washed with lime water, in which a few grains of the submuriate of mercury have been dissolved or blended, afterwards dressing them with the quicksilver ointment and cerate of calamine, equal parts.

If there are ulcers in the tonsils, palate, and other parts of the throat, or in the nose, destroying these parts, they should be well washed twice or thrice a day with some proper gargle, such as the following: Dissolve four grains of oxymuriate of mercury (corrosive sublimate) with half an ounce of rectified spirit in a glass mortar, then add barley water five ounces, tincture of myrrh one ounce, and honey of roses five drachms. Mix them well together, and gargle the mouth and throat frequently. If the nose is affected, the wash may be thrown up by the nostrils by means of a small syringe. The fumes arising from about half a drachm of the red sulphuret of mercury thrown upon a hot iron, may likewise be inhaled or brought in contact with the diseased parts, by means of an inverted funnel. If the remedy proves harsh or very unpleasant to the patient's breath, the grey oxyd of mercury may then be substituted in the like quantity.

If the rest is much disturbed by nocturnal pains, an opiate (see the Class of Anodynes, P. 1 or 5), in the form of a pill or draught, may be taken at bed-time. Going into a warm bath occasionally in the evening may help also to alleviate them. Where there are blotches or scaly eruptions on different parts of the body, this remedy, assisted by the compound decoction of sarsaparilla, (see the Class of Alteratives, P. 12,) of which a pint may be drank daily, will be likely to produce a good effect. If these complaints do not readily give way to the other mercurial remedies which have been previously recommended in the treatment of the confirmed lues, a trial may be made of the oxymuriate of mercury in solution, in the dose of half a grain twice a day, in addition to the decoction of sarsaparilla. The way to prepare the solution is to dissolve as much of the oxymuriate in brandy or rectified spirit, as will give half a grain to half an ounce of solution. Much success has attended a use of this medicine in those cases of lues which are accompanied by blotches or scaly eruptions.

When the eyes are affected with considerable inflammation, it may be advisable to abstract blood topically, by means of half a dozen leeches applied near the part, or from the temples by cupping, after which, the bowels should be freely opened by some purgative, and then a blister be applied behind each ear, or to the nape of the neck. In addition to these means, the eyes must be protected from the irritation of any bright light, by wearing a deep green

shade over them, bathing them three or four times a day with some mild eye-water, composed of a few grains of sulphate of zinc, or the superacetate of lead dissolved in rose water. (See the Class of Astringents, P. 17 or 18.)

Painful nodes on the shin bones and other parts usually give way to a mercurial course, assisted by the compound decoction of sarsaparilla, if duly persisted in; and perhaps covering the parts with a mercurial plaster spread on leather or thick linen, may not be an unprofitable application. In cases of long standing, where the surface of the bone becomes diseased, the assistance of a skilful surgeon will be required that an exfoliation of the carious part may be induced.

In shattered constitutions, and where a tendency to dropsical swellings, wide-spreading ulcerations, or any untoward appearances present themselves, the patient should immediately desist from pursuing the mercurial course, until the constitution is renovated, and the unpleasant symptoms have subsided; taking in the mean time light nutritive food, and breathing pure country air, with such moderate exercise each day as his strength will admit of.

In a disordered state of the system, arising from an excessive use of mercury, the nitric acid usually produces a very salutary effect, and it is likewise a good auxiliary remedy in most cases of lues requiring a long continued course of mercury, but it should never be relied upon alone, to the exclusion of the latter; this being the only specific remedy upon which a reliance can or ought to be placed. The patient may begin with fifteen drops of diluted nitric acid in two ounces of the compound decoction of sarsaparilla, repeated twice or thrice a day, increasing the dose of the acid gradually after a few days to eighteen or twenty drops, if it sits easy on the stomach.

A variety of medicines among the vegetable tribe, such as the blue cardinal, bitter sweet, and the stemless milk vetch roots, made into decoctions with water (see the Class of Alteratives, P. 15 and 16), have been recommended in the cure a confirmed pox, but no reliance ought to be placed on them; and even as auxiliaries to mercury, the compound decoction of sarsaparilla is entitled to a preference.

In mild cases of lues, it may be sufficient to persevere in a use of these two last remedies in conjunction for about six weeks, but in inveterate cases and those of long standing, a perseverance for eight or ten weeks may be required; and that the certainty of a perfect cure may be established, the course should be continued even for a short time after the cessation of every symptom, as the venereal poison may have stopped to all appearance, and the symptoms disappear, and yet many of them re-appear at some distant period, from the virus not having been completely subdued.

During the mercurial course the patient should abstain from salted and high-seasoned meats, confining his diet to a very mo-

derate portion of animal food, which is light and easy of digestion, but a larger one of thin broths, preparations of barley, rice, sago, arrow root, light puddings, milk, vegetables, ripe fruits, &c. He should avoid acids of the vegetable class, as likewise all spirituous liquors. If he drinks wine at all, it should be well diluted with water, but unless pressing debility exists, it had better be refrained from altogether. He should wear flannel next to his skin, and cautiously avoid any exposure to cold or wet, keeping his chamber of a well-regulated temperature, by all which means the mercurial course will be kept under due controul, the remedy produce its effects with greater safety and certainty, and the malady yield more readily and satisfactorily to its operation.

OF PAINFUL AFFECTIONS.

OF THE HEAD-ACH.

The head-ach is not usually a primary affection, being for the most part only symptomatic, or attendant on some other disease, such as fever, translations of gout or rheumatism, indigestion, &c.; but in some cases it occurs without any other disorder, and is then both tedious and difficult to remove.

The affection sometimes occupies the whole of the head; at other times, it is confined to a particular side, or to the back part of the head; now and then it is seated in the forehead, and cases do occur where the pain occupies so small a portion that it may be covered with the end or point of the finger. Different names have been applied to the disease, according to the part of the head which is affected; but in a work on domestic medicine it is of no importance to enumerate them.

Causes.—Whatever obstructs the free circulation of the blood through the vessels of the head, or determines a greater quantity of it thereto at one time than is natural, may occasion the head-ach. Sometimes it proceeds from the suppression or diminution of an accustomed evacuation, as the bleeding piles, hemorrhage from the nose, suppressed menstruation, or sweating of the feet. Occasionally, it arises from the retrocession or repulsion of the gout or rheumatism, the erysipelas, measles, small pox, or other eruptive diseases, and now and then it is occasioned by venereal matter circulating in the mass of fluids, but particularly affecting the skull.

It may also arise from long exposure of the head to the intense heat of the sun, from a want of sleep, indigestible and acrid food contained in the stomach, from access in drinking or eating, too long fasting, costiveness, and from bile which has regurgitated from the gall bladder back into the stomach, instead of passing into the intestines.

Symptoms.—The symptoms which attend on a head-ach will usually vary according to the cause which has given rise to the

complaint. Where it has arisen in consequence of fever or any other disease, it will be likely to cease on the removal thereof. When it occurs in a person predisposed to apoplexy, from a determination of blood to the head and an overfulness of the vessels, it will be attended with giddiness, noises in the ears, and a pulsatory sensation in the head. When of a rheumatic nature, and the membrane covering the skull is principally affected, the patient will experience a slight pain on pressing the scalp with the fingers, and most likely there will also be a pain in the shoulder or some other part of the body. When owing to a hypochondriac or hysteric disposition, it is accompanied by a variety of symptoms, particularly costiveness, flatulence, indigestion, coldness of the extremities, lowness of spirits, and the seat of the pain may frequently be covered with the end of the finger.

When it arises from the sudden suppression of some customary discharge of blood, there is generally a pain in the whole of the head, the vessels become enlarged, the pulsation of the temporal arteries is stronger, and the carotid arteries beat quicker than in health, the nostrils are parched and dry, and the skin heated beyond its usual temperature. In this case, there will be danger of apoplexy or palsy.

When head-ach attends acute fever, and is accompanied by a discharge of limpid urine for any continuance, it may be looked upon as an unfavourable symptom. When it arises in hypochondriac or hysterical persons, is very acute, and accompanied with a throbbing of the temporal arteries, it is apt to terminate in mental derangement. Proceeding from any fixed nervous affection, it is always very difficult to remove, and the patient most likely will have frequent returns of it. It has been mentioned that a repulsion of the gout, erysipelas, small pox, and other eruptive diseases, is not unfrequently the cause of head-achs; in such instances, when a sudden pain in the head is succeeded by a faltering in the speech, ringing in the ears, and weakness in the knees, there will be great danger from an attack of apoplexy.

Treatment and Regimen.—Where the disease proceeds from an overfulness of the vessels, or too great a determination of blood to the head, its quantity and force should be lessened by drawing off a sufficiency, either by leeches applied to the temples or the scarificator and cupping glass to the neck. After this, the body should be freely opened by some active purgative of a cooling nature, such as a pill containing two grains of calomel and an equal quantity of rhubarb, taken at bed-time, succeeded the next morning by an infusion of senna with the sulphate of magnesia or soda dissolved in it, (see the Class of Purgatives, P. 4), which dose may be repeated every four or five days as long as the complaint lasts.

If it resists these remedies, a blister should be applied to the nape of the neck, the feet be immersed for ten or fifteen minutes in warm water, and afterwards kept warm by flannel socks. Lin-

en cloths, wetted in cold water and vinegar, may be kept constantly to the forehead and temples; or the head may be shaved, and these applied pretty generally over it. In persons of a gross and full habit of body, issues, or a perpetual blister, may be of infinite service. In all such cases, the diet ought to be spare and light of digestion.

There is a great sympathy between the head and stomach; wherefore it frequently happens that where the latter is oppressed with crudities and indigestible food, the head is frequently affected with pain. Where such a cause is suspected of having occasioned the complaint, it will be advisable to give a gentle emetic of a few grains of ipecacuanha in the evening, followed up the succeeding morning by a sufficient dose of magnesia and rhubarb or any other gentle laxative.

In the head-ach which arises from a costive state of the body, all that will be requisite is to establish a habit of regularity in the bowels to act naturally if possible, by soliciting evacuations at certain periods every day; and until these attempts are crowned with success, the patient must procure one or two motions each day, by taking the bulk of a nutmeg of the electuary of senna, &c. (see the Class of Laxatives, P. 10,) every night on going to bed, assisting its aperient effect by a lavement of tepid water with soap dissolved in it, or about half an ounce of the sulphate of soda in ten or eleven ounces of thin gruel.

Where head-ach has arisen as the consequence of some nervous affection, such as the hypochondriac or hysteric, the most suitable remedies are valerian, camphor, æther, assafœtida, ammonia, and the Peruvian bark; and these may be taken in any of the forms recommended in the Class of Antispasmodics. Rubbing the forehead and temples occasionally with a little æther, or smelling to volatile salts or spirits, may possibly afford a temporary relief. The habit or general frame is at the same time to be strengthened by a nutritive diet, consisting chiefly of animal food, together with a moderate quantity of wine; by great regularity as to the hours of rest, rising, and the different meals; by associating with cheerful company and frequenting some of the fashionable watering places; by gentle and regular exercise every day in the open air; and by paying proper attention to the state of the bowels, taking care that they are neither confined nor too open.

In the head-ach which is occasioned by a stoppage or running at the nose, the patient should snuff up his nostrils any of the preparations of tobacco, the powder of white hellebore, or the compound powder of asarabacca, so as to promote a copious secretion from the mucous membrane of the nose.

If head-ach has arisen from a translation of gout from some other part, it will be advisable to apply small blisters to the legs or feet, with the intention of exciting inflammation there; and to open the bowels sufficiently by some purgative, such as half an ounce of the compound tincture of rhubarb, or two drachms of the wine of the meadow saffron (colchicum), a remedy of high utility in both gout and rheumatism.

For the head-ach arising from a rheumatic affection, which is apt to occur on any change of the weather, and particularly during the prevalence of a cold sharp wind, about two grains of the antimonial powder, or ten of the compound powder of ipecacuanha, taken every night at bed-time, and the use of a foot or general warm bath, will be the best remedies; and these may be assisted by holding the head over the steam arising from hot water, covering it afterwards with a flannel cap. In the course of the day, a dose or two of the ammoniated tincture of guaiacum (from one to two drachms) may be taken in a little milk or any viscid fluid, paying proper attention at the same time to the state of the bowels, and, if confined, obviating this by aperient pills. See the Class of Laxatives, P. 7. If general plenitude accompanies the head-ach, a loss of some blood by leeches or cupping from the temples, and applying a blister to the nape of the neck, will also be proper.

If head-ach is attended with long want of sleep and slight wanderings, we may venture to give a considerable dose of any opiate, provided proper evacuations by topical bleeding and purging have been premised.

In periodical head-achs, very beneficial effects have resulted from giving the solution of arsenic, as noticed under the head of Intermittent Fevers, in doses of about three drops, repeated twice a day at first, increasing the number gradually to eight.

The regimen, in all cases of head-ach, should be of the cool diluting kind; the food should be of an emollient aperient nature, and likely to keep the body regular. It ought to consist of a larger proportion of vegetable than animal food, and the drink be diluting. Persons who are subject to frequent recurrences of the complaint should keep their feet and legs warm, and bathe them occasionally in hot water: the head had better be shaved, and be immersed morning and night in cold water. They should eat sparingly at supper, lie with the head raised high, and avoid much stooping.

OF THE TOOTH-ACH.

This complaint usually arises from the exposure of some branch of the nerve of the tooth to cold air, in consequence of a decayed state of the enamel and bony substance of the tooth, in which case the pain originates in the one affected, and is perhaps diffused to others. It is, however, not unfrequently occasioned by inflammation of the membrane lining the socket, which at last terminates in the formation of matter, and produces what is called a gum boil. In some cases, the complaint seems to proceed from a rheumatic affection of the membranes and muscles of the jaw, occupying one entire side of the face. Either from increased irritability, or from sympathy, women, during the first three or four months of pregnancy, are often troubled with this painful complaint.

It may be occasioned by neglecting some part of the usual co-

verings of the head, by sitting with the head bare near an open window, or exposing it to a current of cool air. Food taken either too hot or too cold, may be considered as injurious to the teeth. Picking them with pins, needles, or any thing that can hurt the enamel with which they are covered, does mischief; as is also the case by cracking nuts in the mouth, or chewing any kind of hard substance.

Extraction of the tooth is the most decisive way to get rid of this painful complaint; but unless it is in a decayed state, it may be advisable to try and afford relief without having recourse to that decisive remedy: moreover, there are many persons who would be too much intimidated to submit to the operation.

When the tooth is sound, but there is a good deal of pain and inflammation in the parts surrounding it, it will be advisable to scarify the gums well with a lancet (which will in general be more readily submitted to than the application of a leech); then for the patient to fill his mouth with some milk and water as hot as he can well bear it, to bathe his feet well in warm water at night, and to keep his bowels properly open by the occasional use of some mild laxative. It is sometimes of service to promote a copious discharge of spittle from the mouth; for which purpose any of the pungent vegetables, such as ginger, sweet flag root, or pellitory of Spain, may be chewed.

If the pain and inflammation are not relieved by these means, but on the contrary appear to be increased, it is probable that matter has began to form under or near the tooth affected, in which case the patient may not only inhale the steam arising from hot water and vinegar, but have flannel cloths wrung out in a warm decoction of poppy heads and chamomile flowers applied outwardly over the part, renewing them as often as they become cool. Suppuration may sometimes be hastened by applying a toasted fig cut open, between the gum and cheek.

In those rheumatic affections of the jaws and teeth to which many persons are very subject under certain states of the atmosphere, and in which the pain is not confined in any one tooth, but occupies the whole jaw, it may be necessary to apply a blister behind the ear of the side affected; to rub the parts outwardly with equal parts of compound camphor liniment and tincture of opium, and inwardly to take a tranquillizing draught (see the Class of Anodynes, P. 5 or 6,) at bed-time, repeating it again in the morning if the pain be very considerable.

In those cases where the tooth is in a decayed state, or there is an opening in it, it has been recommended to destroy the sensibility of the nerve by applying a hot iron wire into it, as the means best calculated to remove the pain. Where the patient will not submit to this operation, either a pill composed of equal parts of opium and camphor (say one grain of each), or a little cotton wetted in the essential oil of cloves, nutmeg, or cajuputi, may be introduced for the time present into the hollow part of the tooth.

At a convenient opportunity it should afterwards be plugged up with gold or lead, by which operation, if properly performed, the tooth may possibly be preserved for some years without any further pain or inconvenience to the person. A spoiled tooth is apt, however, to affect others, and will never again become sound, and in some cases the pain cannot be removed without extracting it. Some time back it was the practice to draw the decayed tooth, and replace it by a sound one from another person; but in consequence of the dangerous and unpleasant effects that frequently resulted therefrom, it has been discontinued. It is now customary to supply the vacancy with an artificial tooth made from the tusk (I believe) of the hippopotamus or sea horse.

The most probable means of preventing the teeth from becoming prematurely decayed, are by washing them every morning with a very soft brush, or a piece of sponge dipped in pure water, frequently removing the tartar which accumulates upon them, and by using about twice a week some testaceous powder, or a little fine powdered charcoal, which has been kept close stopped in a phial immediately after being charred. The latter is an excellent dentifrice, and quickly takes away the bad smell from decayed teeth.

If the gums have a tendency to become spongy and the teeth somewhat loose, the mouth should be washed with equal parts of the tincture of bark and myrrh, somewhat diluted with a little tepid water. The same wash will also prove useful in preserving for a time teeth that are somewhat disposed to decay.

OF PAIN IN THE EAR.

An acute pain in the ear most frequently arises from inflammation of the membrane which lines its internal cavity. It is accompanied by a sense of throbbing, noise in the organ, sometimes deafness, and general symptoms of fever, such as great restlessness, anxiety, heat, thirst, and not unfrequently with stupor and delirium. When the pain is very severe, epileptic or convulsive fits are apt to arise.

The most frequent causes of this complaint, are exposure to cold, or the secretion of an acrid matter from the glands of the ear: it may, however, arise from various other causes, as from external violence by a blow or fall, from an insect getting into the ear, from some hard body sticking in the passage to it, or from any of the causes by which inflammation in general may be produced.

Where the complaint has arisen from any extraneous body lodged in the ear, this must be removed as quickly as possible; after which, a little warm olive oil may be dropped in, then some cotton be introduced, and the whole of the head be well protected from cold.

Sometimes a pain in the ear is the consequence of association with a diseased tooth; in which case, rubbing the cheek externally

of that side with equal parts of æther and tincture of opium, and putting a pill composed of two grains of camphor and one of opium into the hollow of the decayed tooth, will be the most likely means to relieve it.

If inflammation in the ear is the cause of the pain, it should be prevented, if possible, proceeding on to suppuration, by bleeding the person, by giving him promptly an active purgative, by putting on a blister behind the ear, and causing him to hold the ear affected over the steam of a hot infusion of chamomile flowers, or these may be boiled with some mallows and poppy heads, and the herbs put warm into a flannel bag, and applied outwardly to the ear. The patient's feet may also be frequently bathed in lukewarm water.

When the inflammation has resisted these means, and there is reason to suppose that a suppuration has commenced, (which may be known by the throbbing pain which accompanies it,) we should then encourage it by first fomenting the ear very well with flannels wrung out in a warm decoction of mallows and bruised poppy heads, and then applying an emollient poultice of the crumb of bread boiled up with milk and a little sweet oil or lard, renewing these applications morning and night. If the pain is very acute, and the patient is deprived of sleep, from forty to fifty drops of the tincture of opium may be given at bed-time in any liquid vehicle.

Should the complaint be accompanied with a high degree of fever, stupor, or delirium, the most powerful general means, as recommended under the head of Phrenzy, should be combined with the local ones.

When the abscess breaks, or can be opened, the discharge should be promoted, and the parts kept clean by injecting a little tepid milk and water twice a day into the ear, and keeping it warmly covered afterwards. One or two doses of some cooling laxative medicine may be serviceable. In very violent forms of the disease where suppuration has ensued, it not unfrequently happens that the structure of the internal ear is destroyed, and that the hearing on that side is wholly lost.

From the severity of the pain and violence of the inflammation in this complaint, a considerable degree of fever is apt to be excited; to moderate which it may be necessary to give the saline medicine combined with nitre (see the Class of Antiphlogistics, P. 4), during the height of the disease, confining the patient at the same time to a very spare regimen, and to diluting drinks, such as barley water, toast and water, imperial, or whey.

PAINFUL AFFECTION OF THE FACE, OR TIC DOULOUREUX.

This is one of the most severe chronic complaints to which the human frame is subject. By some physicians it has been considered as consisting in an inflammatory condition of the nerve affected; but this does not seem probable, as although, during the paroxysm, there is frequently considerable pain when pressure is made on the nerve with the finger, yet its coming on at different periods and not being constant, militates very much against the belief of its inflammatory character. By some it has been supposed to consist in a rheumatic or gouty irritation, and by others in a cancerous acrimony attacking the affected nerve. All these suppositions seem, however, to be perfectly visionary. In all probability the disease is occasioned by some derangement of the nerves of the part, with which we are wholly unacquainted.

The most frequent seat of the affection is in the nerves over the cheek bone, just below the orbit of the eye; the nostrils, upper lip, teeth, and gums. Sometimes, however, the forehead, temple, and eye, are the parts first affected; but from the intimate connexion of most of the nerves of the face with each other, the disease seldom continues long without extending its ravages, and, in very inveterate cases, they possibly may all be affected.

The pains are not, however, confined to different parts of the head, but have been met with in other portions of the body, such as the breast, side, and calf of the leg. The complaint begins with slight attacks of pain, preceded by peculiar and indescribable sensations in the part affected. The pain, however, soon becomes more acute and lancinating, shooting and darting along the various ramifications of the affected nerves. It returns at irregular intervals, and varies in intensity. When most violent, the parts are frequently convulsed. Its attacks are more frequent during the day than the night, and during conversation than silence; and, on attempting to masticate, the paroxysms succeed each other with considerable increase of rapidity. In general, only one side of the face is affected when the disease occupies the head.

Tic douloureux most usually arises in persons of a delicate and irritable habit, for the most part between the fourtieth and fiftieth year, but has been known to occur at all ages, and to attack the strong as well as the debilitated; and is brought on by exposure to a moist cold atmosphere, by uneasiness of mind, bodily fatigue, or by external violence. In some cases it may proceed from a decayed tooth. Our knowledge of its exciting causes is, however, extremely limited.

The disease has pretty generally been supposed to be primarily seated in the nerves of the face; but by one or two physicans it has been thought to have its origin in the brain, to which the affection of the face merely stands in the relation of an effect.

The only diseases likely to be confounded with this, are rheumatism occupying the face and jaws, and the tooth-ach. Tic douloureux has, no doubt, been frequently mistaken for the tooth-ach; a circumstance which has been productive of considerable distress to the patients, as they have been induced to undergo the extraction of many of their teeth without the least amelioration of their complaint. It may, however, readily be distinguished from the former of these diseases, by an attack of pain being readily excited by the slightest touch, by the shortness of its continuance, and by its extreme severity and violence: moreover, in rheumatism, if acute, there is redness and increased heat in the part, and generally some degree of swelling accompanied by fever; but if of a chronic nature, the pain is obtuse, long continued, and very apt to be increased at night; none of which symptoms usually occur in tic douloureux.

It is to be distinguished from the tooth-ach by the shortness of its continuance, the rapidity of its succession, and there being an entire freedom from pain during the intervals; by its convulsive twitchings, by the seat of the pain, and its darting in several directions according to the different nerve which is affected.

Treatment.—A very great variety of medicines given internally, as well as remedies applied externally, have been tried for the alleviation and removal of this excruciating complaint, and even a division of the nerve has been resorted to; but although this operation has answered the purpose in a few cases, still it has failed in many others.

Electricity, magnetism, issues, moxa, the actual cautery, blisters, topical bleeding by means of leeches, stimulant and anodyne embrocations, and frictions with mercurial ointment, or that of the tartrate of antimony, have all been employed in rotation as external applications; whilst the solution of arsenic, large doses of the extract as also powder of the Peruvian bark, preparations of iron, copper, lead, and silver, opium, and the extract of henbane, hemlock, stramonium, and nightshade, have been administered internally in considerable doses.

It appears that the nightshade (bella donna) has in many cases proved a powerful and very efficacious medicine, and may therefore be given with confidence. From two to three grains of the extract have been administered every five or six hours to adults during the great severity of the pain, or from twenty to forty drops of the tincture, lessening the dose very considerably as soon as ease was procured. It will always be most advisable to begin the use of this medicine in small doses, such as half a grain of the extract for an adult, repeated every four or six hours, increasing the quantity by degrees to about two grains; and we may at the same time make trial of it as an outward application to the cheek, by laying over it a bit of fine linen rag moistened in a solution of the extract in water, in the proportion of six grains of the former to two ounces of the latter, or it may be wetted in the tincture of nightshade.

The use of this medicine internally is, however, attended occasionally with distressing symptoms, when given in such doses as to produce a certain effect, as impaired vision, giddiness in the head, numbness, tightness at the chest, and a sense of suffocation with dryness in the throat; but these soon cease again on greatly diminishing the dose or wholly discontinuing the remedy.

As persons unaccustomed to the use of so active a medicine might be intimidated even by the probability of such unpleasant consequences, I would recommend them to make a previous trial of the carbonate of iron, in doses of one scruple, repeated three times a day, gradually increasing each dose to the extent of one drachm, if no decided benefit is derived by taking it in smaller quantities. This remedy I have employed in two or three cases of tic douloureux after a failure of very large doses of the extract of bark, the solution of arsenic, and most of the other means usually resorted to, with an exception of nightshade, in all of which the complaint soon ceased, and has not again returned in any of them. In one of them, the patient, a man sixty years of age, after a few days' use of the medicine, being engaged in a jolly party, became much inebriated with wine, and the disease ceasing wholly, he was induced to attribute the removal of the disorder to the intoxication rather than to the medicine.

It might probably be of service during a course of the carbonate of iron in tic douloureux to conjoin a free use of wine.

The sulphate of quinine is a remedy which has been much employed of late by some French physicians, and with success, it is reported, by being given in the quantity of sixteen grains or a scruple in the twenty-four hours: say four to five grains made into a pill, repeated four times a day.

In the treatment of this very painful complaint it has been advised to paralyze the nerves by the application of an ointment, consisting of two scruples of the acetate of lead mixed with a little lard, every morning on the cheek affected, about an hour before the paroxysm is expected. The experiment has been tried with success by Mr. Astley Cooper, in a case which had previously resisted every other remedy, and even a division of the nerve by the knife.

The mode of treatment recommended by those physicians who consider the complaint as having its origin in the brain, and not being primarily seated in the nerves of the face, is by general and local bleedings, purgatives, and the occasional application of blisters to the shaven scalp or nape of the neck.

OF PAIN IN THE STOMACH.

This complaint may arise from a variety of causes, such as indigestion, flatulence, acidity, acrimonious bile, worms, the translation of gout or rheumatism, or from acrid or poisonous substances received into the stomach. Occasionally it arises from a scirrhous or otherwise diseased state of the lower orifice (the pylorus) of this

organ, or a cancerous ulceration of its coats, as was the case in the malady of the late General Buonaparte, as appears by the report of the surgeons who opened his body.

Sometimes the gastric juice itself becomes so acid as to excite pain in the stomach; and it is not improbable that violent heartburn is more frequently owing to an increase of the acidity of the gastric juice than to the acetous acid produced by fermenting aliment.

A pain in the stomach is most apt to occur in persons of a hypochondriac disposition, who lead a sedentary life, and feed high; in those who overload their stomach with a greater quantity of food than the digestive powers are equal to, and in women of a delicate constitution, or who are subject to hysterical affections.

The disease proves in many instances extremely obstinate, and in a few baffles the powers of medicine.

Treatment and Regimen.—When a pain in the stomach is most frequent after eating a meal, it probably arises either from some defect in the digestive powers, or from the food being of such a quality as that the stomach cannot readily act upon it. In cases of this nature the patient ought to make frequent changes in his diet, avoiding every thing that is heavy or hard, such as salted meats, and using only such articles for food as will sit light on the stomach and be easily digested, as the flesh of young animals, poultry, and fish; or if these disagree, animal food may be omitted altogether, and the diet consist wholly of milk, vegetables, and farinaceous preparations, such as bread puddings, rice, arrow root, sago, &c.

With respect to medicine in such cases, the most advisable will be a course of stomachic bitters in any of the forms advised in the Class of Tonics, assisted by daily moderate exercise in the open air, either in sailing, on horseback, or in a carriage. Frictions with the hand, or a soft flesh brush every night and morning over the region of the stomach may possibly be of some benefit. Persons afflicted with this complaint should be particularly careful not to swallow their food without well chewing it first, that it may not only be well broken down, but intimately mixed with the salivary discharge, as this assists its easy digestion, and prevents it fermentation, and they should likewise guard against costiveness.

The oxyd of bismuth has been found to afford great relief in some cases of this complaint, and may therefore be tried should the above means not be productive of the desired effect. It will be best to begin with it in doses of three grains, joined with a scruple of gum tragacanth, increasing the quantity of the former in a gradual manner to ten grains in each dose. Where the pain is very acute it may be necessary to substitute an occasional use of opium joined with æther, as in the following draught, repeating it as the urgency of the pain may seem to require: Take camphor mixture, ten drachms; æther, half a drachm; and tincture of opium, thirty to forty drops. Mix them well.

When a pain in the stomach proceeds from flatulency, and marked by an uneasy distention of the organ after eating, and a belch-

ing up of wind, this should be obviated by the patient's abstaining from all food of a flatulent nature; by occasionally taking some carminative medicine (see this Class, P. 1, 4, or 5); and by a regular course of tonics joined with stomachics, and a few drops of the diluted sulphuric acid; various forms of which are given under the head of the Class of Tonics.

Should flatulency be accompained with acidity in the stomach, given rise to heartburn and a painful sensation, this must be corrected by the draught, P. 3, in the Class of Absorbents. The bowels should be kept open, if necessary, by some gentle laxative, such as rhubarb and magnesia.

If the pain is occasioned by gout or rheumatism translated to the stomach, the patient must take freely of warm cordials, as strong brandy and water or spiced wine; he must have blisters or sinapisms of mustard applied to the legs, having first immersed them in warm water, and frequently take the following draught: Mix one ounce of camphor mixture, two drachms of ammoniated tincture of guaiac, one drachm of æther, and forty drops of the tincture of opium. Frictions with a liniment, consisting of equal parts of volatile spirits and that of camphor, may also be employed externally over the region of the stomach. If there is an inclination to vomit, it may safely be promoted by drinking a tepid infusion of chamomile flowers.

When a pain in the stomach has been brought on by the swallowing any acrid or poisonous substance, the discharge of it, as quickly as possible, should be promoted by using the stomach pump as mentioned under the head of Mineral and Vegetable Poisons, or where this is not at hand, by an active vomit (see the Class of Emetics, P. 7 or 8), assisted by drinking freely of a solution of gum acacia in barley water, linseed tea, or thin gruel; afterwards taking such antidotes as are best suited to the nature of the particular poison which has been swallowed, and for which I beg leave to refer the reader to the head of Poisons.

If worms occasion the complaint, these must be dislodged and destroyed by the medicines recommended under the head of these vermin.

Should it be occasioned by the stoppage of some accustomed discharge, as the bleeding piles, hemorrhage from the nose, or obstructed menses, it will be necessary to supply this defect by bleeding in the first place, then well opening the bowels by laxative medicines, and afterwards resorting to every means likely to reproduce the discharge that has been suppressed, be it whatever it may.

Persons who are subject to the cramp, or spasmodic affections of the stomach, should avoid green vegetables and fermented liquors; and they should wear a large aromatic plaster over the region of this organ. As a medicine, they may take the following draught twice a day, adding, when the pain is severe, from twenty to thirty drops of the tincture of opium. Mix one ounce and a half of camphor mixture, one drachm of æther, and half a drachm of aromatic ammoniated spirit, together.

OF A PAIN IN THE BOWELS.

For the symptoms, causes, and treatment of this disease, I beg leave to refer the reader to the heads of Colic, Inflammation of the Intestines, Diarrhæa, and Dysentery.

VARIOUS DISEASES.

OF THE EYES AND DEFECTIVE SIGHT.

No part of the human body is more liable to diseases than the eyes, and these delicate organs may be injured from various causes, such as continued head-achs, stooping too much, long exposure to the influence of the sun, intense study, particularly by candle-light, the effluvia of volatile and acrid substances, extraneous substances lodged between the lids of the eye, an immoderate use of spirituous liquors, the suppression of some accustomed evacuation, venereal matter circulating in the constitution, scrofula, exposure to cold and piercing winds, &c.

Affections of the eyes arising from these three last causes have been noticed under the several heads of Opthalmia, Lues Venerea, and Scrofula, and therefore I shall proceed to notice some other cases of defective vision, and first

The Gutta Serena.—In this species of defective sight, the eyes remain fair and apparently unaffected; but whether the object presented before them be near or at a distance, there is a dimness with atoms floating before them: moreover, the pupil is usually dilated and deprived of the power of contraction. It may proceed from some affection of the optic nerves, apoplectic fits, contusions on the head, over-distention of the blood vessels of the brain, frequent exposure to the rays of the sun, continued intoxication, the excitement of strong passions, especially of terror and anger, or from immoderate venery, &c.

The disease is usually incurable, but may be relieved by the application of blisters to the back of the neck; issues behind the ears; promoting a discharge from the nose by using the compound powder of asarabacca as snuff; and by stimulant eye-waters dropped into the eyes morning and night, such as an infusion of capsicum in water, in the proportion of one grain of the former to an ounce of the latter. Galvanism and electricity have sometimes proved beneficial, and should be tried when other remedies fail. A few very slight shocks of the latter may be passed through the forehead daily, and sparks afterwards be drawn from the parts which surround the eyes.

If the patient is young and robust, some blood should be taken away from the neighbourhood of the head by leeches or cupping, particularly where there is reason to suspect the disease to be occasioned by an over-distention of the blood vessels of the brain, or

it is accompanied by a pain in the head. In all cases of this species of defective sight, costiveness should be guarded against by procuring a sufficient number of stools daily. Indeed, the disease is said to have been sometimes wholly carried off by medicines which remove obstructions in the bowels and evacuate them.

Squinting or Strabismus.—This defect in vision may arise from an irregular contraction of the muscles of the eye, from spasm, epilepsy, or apoplexy, or it may be occasioned by a habit contracted by imitating others labouring under the complaint.

Squinting is very difficult to cure ; but we may in most cases afford some relief by the simple process of binding up the sound eye every day for three or four hours at a time, so as to oblige the person thus affected to make use of the distorted one, and according as it is more or less affected, to keep the other more or less veiled, continuing the process until the diseased eye can properly perform its office.

In some cases the defect has been attempted to be obviated, when not confirmed by long habit, by making the child wear, for some hours every day, a piece of green gauze stretched on a circle of any kind over the best eye, in such a manner as to reduce the distinctness of the vision of this eye to a similar degree of imperfection with the other.

Cataract.—This is only to be cured by a surgical operation, either by depressing the crystalline humour which has become opaque, or by extracting it.

Specks or Spots.—The sight is not unfrequently rendered imperfect by the formation of these on the eyes, in consequence of previous inflammation, the small pox, or measles. When not early attended to, they become very difficult to remove, and often occasion a total loss of sight. If the specks are thin, and of no great extent, they may now and then be got rid off by some gentle escharotic, such as the sulphate of zinc, applied to the part affected on the point of a fine camel's hair pencil. Should this fail, a trial can be made of a little of the ointment of nitric oxyd of mercury applied as before.

Blood-shot Eye.—This most frequently arises by a blow or fall, but now and then occurs from a severe fit of coughing or vomiting, during which a small vessel is ruptured, and the blood extravasated in the contiguous parts. It appears at first of a deep scarlet colour, but after a short time becomes dark and livid.

The complaint seldom requires the aid of remedies, but should it be of a severe nature a little blood may be taken away from the neighbouring temple by means of a cupping glass and scarificator, or a few leeches ; the eye be bathed several times a day with a lotion composed of three ounces of rose water, and about eight drops of the solution of acetate of lead, covering it immediately afterwards with a deep green shade, so as to prevent any exposure to a strong light or cold ; and the bowels be freely opened

by some cooling purgative medicine. See the Class of Purgatives, P. 4.

The Watery or Weeping Eye frequently is occasioned by an obstruction of the natural passage of the tears or lachrymal duct, forming what is known to surgeons under the name of fistula lachrymalis, a complaint only to be removed by an operation.

Sometimes, however, it arises in scrofulous habits, or from a relaxation of the glands of the eye. In the former instance, the application of a blister, issue, or seton in the neck, may be serviceable with the other means advised under the head of Scrofula: in the latter instance, it may be sufficient to brace and strengthen the parts which throw out the fluid, by washing them several times a day through the medium of an eye-cup with a weak solution of the sulphate of zinc in rose water, say ten grains of the former to four ounces of the latter.

OF NIGHT BLINDNESS.

In this disease the sight is perfectly good and distinct during the day-light, but the patient is incapable of discerning objects by night. In cold climates it rarely occurs, but is frequently met with in tropical ones, as also in the southern parts of Europe.

The complaint becomes apparent towards evening, with a dimness of sight that increases gradually as the night approaches, and the darker it is, the more indistinct vision becomes. In general it is not marked by any peculiar symptoms, except that a more than ordinary fulness is experienced by the patient over the eyes and forehead.

Sometimes the disease is symptomatic of a derangement in the biliary organs, and occasionally it accompanies the sea scurvy, particularly between the tropics; but it has been supposed most generally to arise from a relaxed condition of the large nerve of the eye, or a paralyzed state of that membrane of the eye called the retina.

Under this supposition, the remedies to be employed are such as tend to restore the parts to their due tone. The eyes are therefore to be washed several times a day with cold water or some astringent lotion, (See P. 17 or 19. Class of Astringents,) the patient at the same time avoiding all exposures to any great glare of light, and wearing a deep shade of thin pasteboard covered with green silk over his eyes during the day-time.

Possibly the applicaton of a blister to each temple might afford some benefit; as might also electricity employed as recommended in gutta serena. The Peruvian bark or sulphate of quinine joined with valerian and chalybeates (See the Class of Tonics) may be the most proper medicines in those cases of the complaint which are owing to a peculiar state of the nerve of the eye or its membrane, as before mentioned. If dependent on sea scurvy, the remedies advised for this disease will be the most appropriate.

OF DEAFNESS.

This complaint sometimes arises from an original defect in the structure or formation of the ear, in which case the person not only continues deaf, but likewise dumb for life. Sometimes it takes place in consequence of preceding diseases, such as fever, ulcerated sore throat, and rheumatism, a confirmed pox, or arises from an exposure to cold; but it may be produced by external violence, as wounds, bruises, &c.; extraneous substances falling into the ear and lodging in its cavities, as likewise by previous inflammation terminating in an abscess. Occasionally, deafness arises, or is dependent upon, a nervous affection.

When the complaint is produced by wax which has become hardened in the ear, this may be syringed night and morning with a little tepid water in which soap has been dissolved, and then have a few drops of oil of almonds on cotton introduced into it; or when it proceeds from too great a dryness in the ear and defective secretion, half an ounce of sweet oil with an equal quantity of the compound soap liniment may be well mixed together, and a few drops thereof be introduced into the ear every night, stopping it afterwards with wool or cotton.

If the complaint has been occasioned by an exposure to cold, the patient should keep his head warm, particularly by night, bathe his feet well every evening in warm water previous to his getting into bed, and promote a moderate universal perspiration by afterwards taking about two grains of antimonial powder made into a pill with a little confection of roses, washing it down with a little tepid liquor of any kind, such as whey, thin gruel, or the like. Should this not act sufficiently, three table-spoonsful of the mixture, P. 7, in the Class of Diaphoretics, may be substituted.

In some cases of long continued and severe deafness, the smoke of tobacco has been employed with great benefit. The mode of using it is to fill the mouth by means of a pipe with the smoke of very strong tobacco, instantly to close the mouth and nose, and then for the person to make all possible effort as if he meant to force the smoke through the nose, which must however be prevented by holding the nostrils very tight, that the smoke may be forced through the Eustachian tubes into the ears. These efforts are to be repeated until one or both ears give a seeming crack, immediately on which the hearing in general is restored in a smaller or greater degree.

Mr. Astley Cooper has recommended the puncturing the drum of the ear in that species of deafness which has arisen from an obstruction of the Eustachian tube; and as the operation has been performed with success in some cases, and is not at all hazardous, it had better be submitted to when judged proper.

OF A LOSS OF APPETITE.

A loss of appetite or loathing of food is commonly a symptom of some other disease, particularly of indigestion or crudities lodged in the stomach; and is therefore to be obviated in cases of the first nature by giving bitter infusions, such as those of gentian, calumba, or cascarilla, joined with chalybeate medicines, or some of the preparations of Peruvian bark, with a few drops of the diluted sulphuric acid, various forms of which medicines are given in the Class of Tonics.

Where a disrelish for food arises from the stomach being oppressed with bile or crudities, a gentle emetic towards the evening, and a proper purgative the next morning, to evacuate the bowels freely, will be the best means to remove the complaint.

OF IMPOTENCE.

This most usually arises either from general debility in the whole system, occasioned by a want of nutritive food, severe evacuations, or preceding diseases of some duration; or from local weakness, induced by an excess in sensual indulgences. Perhaps it may in a few instances be owing to some defect in the organs of generation, or to fear and a want of sufficient confidence at the time.

If impotence proceeds from general debility, the proper means to be employed are, to strengthen the body by a generous nutritive diet, pure country air, moderate exercise taken regularly every day, cold bathing (both general and local), and by the Peruvian bark, joined with chalybeates, and the diluted sulphuric acid. See the Class of Tonics, P. 9 and 16. Small doses of some stimulating medicine, such as the tincture of Spanish fly, might possibly prove beneficial, as in the following draught, which may be repeated twice or thrice in the course of the twenty-four hours: Take of a decoction of bark, ten drachms; wine of iron, one drachm; and tincture of Spanish fly, from fifteen to twenty drops.

OF INVOLUNTARY EMISSIONS.

In some cases, an involuntary emission of semen takes place during the night, in consequence of an overfulness of the vessels in which this fluid is deposited after its secretion, or it proceeds from general debility of the whole system; but generally it is the effect of local weakness in the parts, occasioned by an over-indulgence in sensuality.

The complaint is often difficult to remove, and not unfrequently it proves incurable, and occasions atrophy, or a general wasting of the flesh and strength.

In the treatment of it the patient must carefully avoid the causes depending upon his will, and strengthen the body in general and the parts immediately concerned, both by a cold bath every morning, and minor ablutions by means of a bidet, and a large sponge and cold water, twice or thrice a day. The best medicines will be chalybeates joined with the Peruvian bark, or sulphate of quinine. See the Class of Tonics, P. 16, 20, and 27. Chalybeate waters may likewise be drank with some advantage, and particularly the Spa water.

OF IMMODERATE SWEATING.

Profuse perspiration is usually an attendant on some other disease, as fever, rheumatism, &c., and is then to be considered as salutary; but it is also met with in the advanced stage of pulmonary consumption, and then adds to the debility. In many instances it is owing to general weakness.

If it is the consequence of relaxation or debility of the system, this must be strengthened by tonic medicines, particularly the Peruvian bark joined with twenty or thirty drops of diluted sulphuric acid in each dose, as likewise by chalybeates and other tonics. See this Class. The patient, if otherwise in health, may employ cold bathing, carefully avoiding the use of warm slops, and an over-indulgence in bed, covering this as well as the body lightly with clothes, and keeping his chamber of a cool temperature by the admission of fresh air into it.

In the colliquative sweats attendant on pulmonary consumption and hectic fever, the diluted sulphuric acid is the most approved remedy, and may be given in the dose of thirty drops or more in a small tea cupful of an infusion of orange or lemon peel, instead of either a decoction or infusion of the Peruvian bark.

OF COSTIVENESS.

The effects produced by costiveness are head-ach, giddiness, a disagreeable taste in the mouth, fetid breath, a disrelish of food, and not unfrequently the piles.

It is generally the effect of a sedentary life, particularly in persons of a sanguineous and choleric temperament, or who are subject to the hypochondriac affection, a diseased state of the liver and spleen, acidity in the stomach or bowels, or a spasmodic constriction of the intestines. Those who labour under a stricture in any part of the intestinal canal are very apt to be troubled with obstinate costiveness.

Feculent matter may become hardened and accumulated from the following causes, viz. neglecting the usual times of going to stool, checking the natural tendency towards it; copious perspiration, great heat of the body, the use of dry indigestible aliments, and taking too great a proportion of solid food to the quantity of liquids.

Sometimes it arises from drinking much of rough astringent wines, such as Port.

Many diseases are frequently the consequence of costiveness, such as a large quantity of bilious matter being accumulated in the intestines, inflammation of the bowels, colics, piles, and vomiting.

Treatment and Regimen.—The diet of such as are of a costive habit of body ought to consist of a large proportion of vegetables, together with ripe fruits; and their ordinary drink should be malt liquors, or what is known under the name of imperial, this being composed of the supertartrate of potash dissolved in warm water, in which some orange or lemon peel has been previously infused. Port wine ought to be avoided, and Sherry or Madeira taken in its stead.

Those who are troubled with costiveness ought, if possible, to remedy it by diet, and establishing a habit of regularity by going at certain hours or periods of the day, and making proper efforts for promoting natural evacuations, as the constant use of medicine for that purpose is attended with many inconveniencies, and often with bad consequences. Moreover, if a natural inclination arises at any time it ought to be encouraged.

If the body cannot be kept open without the aid of medicine, about the size of a small walnut of the confection of senna may be taken at bed-time; and, if not found sufficient, the same quantity may be repeated in the morning, or the person may take an aloetic pill or two occasionally in the evening.

Clysters might in many cases be the preferable way of evacuating the contents of the bowels, and may be self-administered by the proper machine invented for that purpose, and employed for giving lavements. A solution of soap in tepid water will often answer the intended purpose; but where it does not, half an ounce of the sulphate of soda dissolved in eleven ounces of thin gruel, or an infusion of senna with the addition of a table-spoonful of castor oil, may be substituted.

When the intestines are loaded with dark bilious matters, but nevertheless are confined, a pill consisting of two grains of the submuriate of mercury and three of the extract of colocynth, may be taken occasionally at bed-time, and a solution of the sulphate of magnesia (See the Class of Laxatives, P. 11 or 12,) the following morning. The same medicines will be useful in costiveness produced by the use of lead, to which painters are particularly liable.

If costiveness is accompanied with piles, the confection of senna combined with sulphur (See the Class of Laxatives, P. 14,) will answer best for obviating it. In those obstinate cases of constipated bowels which resist the use of ordinary purgatives assisted by laxative clysters, we may make a trial of the Croton oil, in the dose of two drops on a small bit of white sugar, or formed into a pill with a little aromatic confection, repeating the medicine, if necessary, every four hours, but in doses of only one drop.

People predisposed to apoplexy are very subject to costiveness; and as this state of the bowels greatly favours overfulness of the blood vessels, it ought most carefully to be guarded against.

Costiveness is not unfrequently occasioned by a stricture in the gut a few inches within the fundament, and occasionally the same occurs higher up in the intestinal tube. The only effectual way of removing any stricture that can be reached, is by a large sized bougie worn for some hours every day, evacuating the feculent matters by laxative clysters or lavements, repeated as the occasion may seem to require, until the strictured part of the gut becomes sufficiently dilated to admit of a figured stool being passed naturally.

THE HEART-BURN.

This complaint is characterized by an uneasy sensation of heat or acrimony about the pit of the stomach, being occasionally accompanied with nausea, vomiting, difficulty of breathing, and a loss of strength.

The most common cause of the heart-burn is a superabundant acid in the stomach, arising from indigestion and a weakness in this organ, or a diseased state of its coats and lower orifice.

When the heart-burn arises from indigestion, the patient may take a dose of magnesia with a few grains of rhubarb, and then commence a course of stomachic bittters, such as an infusion of gentian, calumba, and cascarilla, adding to each dose a tea-spoonful of the compound tincture of Peruvian bark, and repeating it twice or thrice a day. Frictions with the hand over the region of the stomach every night and morning for a few minutes, together with moderate exercise in the open air, paying at the same time a proper attention to diet, will be the most likely means to remove the complaint.

If there is great acidity in the stomach, it may be obviated by giving the patient absorbent medicines of the aperient kind. See the Class of Absorbents, P. 1, or 3). When it is accompanied by flatulence, it may be necessary to give occasionally some carminative. See this Class, 4 or 5. As such, likewise ginger, cinnamon, aniseeds, or cardamom seeds, may either be chewed or be infused in wine or brandy. In severe cases of heart-burn, particularly that which accompanies pregnancy, two table-spoonsful of the following mixture may be taken occasionally. Mix well together one drachm of magnesia, five ounces of water, half an ounce of the spirit of carraway, and one drachm of the solution of ammonia.

Persons who are subject to frequent attacks of the heart-burn should be very cautious in what they eat or drink, avoiding fat meats or much butter, and abstaining from drinking acid or stale malt liquors. They should be careful never to make too full a

meal, but eat often and sparingly at a time. A little weak brandy and water is the liquor best adapted for persons who are very subject to the heart-burn.

OF CORPULENCE.

An excess of flesh and fat may be considered as nearly approaching to real disease; for it is attended with several unpleasant and distressing consequences, such as a difficulty of breathing, particularly on any exertion, excessive perspiration on the least exercise, and inability of moving quick, together with oppression, inflation, and distention.

The great increase of the omentum, or that expansion of fat which covers the intestines in front, considerably enlarges the size of the body, and from hence the motion of the different parts connected with the office of respiration become impeded; so we generally find that as people get corpulent they are more or less affected with a shortness and difficulty of breathing, added to which, the heart and large blood vessels connected therewith, are somewhat obstructed by being thus incumbered; and hence are induced a slowness of the pulse, listlessness, and inactivity to much exercise or motion, somewhat of debility, and a great disposition to sleep and dulness, terminating not unfrequently in an apoplectic seizure and death.

Besides the natural disposition in some persons to obesity, it may be produced by too free an indulgence of the appetite, in using food of a very nutritive nature, and drinking ale, porter, and such like liquors, refraining at the same time from any active exercise, and leading a life of indolence and ease. In such cases, corpulence steals on so imperceptibly as to be considered by many as a symptom of increasing health; nor are any means of relief judged necessary by the person until the complaint has become somewhat distressing and formidable.

Treatment and Regimen.—The causes of excessive fatness and corpulence being clearly understood, the means both of prevention and removal are perfectly obvious, and depend upon the proper regulation of the diet, sufficient and regular exercise every day, and the avoiding too long an indulgence in bed.

The person who perceives himself or herself getting too corpulent, should diminish, in a gradual manner, the quantity of his food as well as the frequency of his meals, especially abstaining from supper; he should refrain from a use of all malt liquors, take sufficient active exercise every day at stated periods, particularly on foot, and not indulge in much sleep. Early rising in the morning becomes therefore highly necessary. It has been supposed by some physicians that confining the patient altogether to a vegetable diet, which affords less nutrition than animal substances, is better calculated to prevent, as well as reduce, an exuberance of fat than any other means; and that it will answer the desired inten-

tion if assisted by proper active exercise, does not admit of a doubt.

In the adoption, however, of means for the prevention or removal of corpulence, some discrimination and care are highly necessary in their regulation; for, when hastily resorted to or put in force, serious consequences have resulted therefrom. In all cases it will be prudent to prevent or reduce an excess of fat in a very gradual manner, by only eating and drinking sparingly at each meal, which may consist principally of vegetable substances; by taking regular and sufficient exercise daily; by a very moderate indulgence in sleep, and by early rising in the morning. Much sleep, abundant food, and but little exercise, are the principal things which make animals fat.

Some persons, but particularly young women, on becoming corpulent, are apt to have recourse to vinegar and other acids with the view of removing it, and beyond doubt, many have sacrificed their lives thereby, as an excessive use of acids is apt to impair the digestive powers and induce many complaints. Persons inclined to obesity may possibly derive benefit by keeping their bowels rather open than otherwise, by means of laxative medicines; but we know of no others at all likely to be serviceable, although soap, the carbonate of soda, and alkaline aerated water have been proposed as suitable remedies.

OF THE GOITRE, OR DERBYSHIRE NECK.

This complaint, being a very common one in Derbyshire, has given origin to its name in this country; but in the valleys of Savoy, and among the inhabitants of the Alps and other mountainous countries where it is very often met with, it passes under the appellation of goitre. It is characterized by a tumour of considerable size in the front of the neck, seated between the windpipe and skin, and has been supposed principally to occupy what is called the thyroid gland by professional men.

The swelling, at first, is unattended by any pain or discolouration of the skin; but as it increases in size, the tumour becomes hard and irregular to the touch, the skin acquires a yellow hue, the veins of the neck are enlarged, the face is subject to flushings, and the patient complains of frequent head-achs, some difficulty of swallowing or breathing, and occasionally he experiences pains darting through the substance of the tumour.

The causes which give rise to this complaint have not as yet been satisfactorily ascertained. From its prevailing much among the inhabitants of districts abounding with saline and mineral springs, it has by some been supposed that the waters descending from these mountains with which melted snow mixes itself, may be impregnated with some saline and mineral ingredients, capable of producing this singular affection in the throat; by others it has been attributed to the effects of the atmosphere; and again by

some to an hereditary predisposition entailed by the parents on their offspring, similar to what occurs in scrofula. The two latter causes seem much more likely to induce the complaint than the former one, as certain experiments have clearly proved that the water of dissolved snow, is, perhaps, the purest of any.

Where the swelling is of considerable size, and the complaint of long standing, it will be a difficult matter to effect a cure of the disorder; but in its early stage, we shall in most cases be able to subdue it by the aid of medicine administered internally, assisted by frictions over the tumour, and other external applications.

Treatment and Regimen.—The medicine which has produced the best effects in this complaint is burnt sponge; and the form under which it has been usually administered is that of a lozenge, prepared as follows. Take of burnt sponge six drachms; powdered gum acacia, one drachm; ginger in powder, half a drachm; common syrup, a sufficiency to form the whole of a proper consistence; then divide the mass into twelve lozenges, of which one is to be used at first, every night and morning, by placing it under the tongue, allowing it to dissolve gradually, and thus swallowing it; increasing the number of doses to three daily after a time, if no good effect is produced.

In preparing the lozenges care must be taken that no more syrup be used than is necessary to make the dry ingredients cohere; for which reason it must be added slowly, and the mass be well beaten. The lozenges are to be dried before the fire on a plate that has been slightly oiled, to prevent them from sticking to it, and then be put into some wide mouthed vessel, such as a gallypot, covered over with bladder, and well tied down.

The subcarbonate of soda being the basis of burnt sponge, and indeed a more active medicine as well as a much cheaper one, may either be employed instead of it in making lozenges, or be substituted for it after a time, if no good effect is derived from administering the former.

It may, however, be advisable, prior to commencing a use of the lozenges, for the patient to take a pill for two or three successive nights, consisting of a grain or two of the submuriate of mercury, and a cooling purgative, (See the Class of Laxatives, P. 11 or 13,) the fourth morning.

At the same time that medicine is thus administered internally, friction with the hand, for at least half an hour twice or thrice a day, with a little soap or camphor liniment, should be employed over the tumour. Should its size not be diminished after a time, we may then substitute mercurial ointment, of which the bulk of a nutmeg may be rubbed in every night on going to bed, washing the part the next morning with a little water and soap. If this also fails, a blister may be applied, and its surface kept discharging for several days, by dressing it either with the fly ointment or savine cerate.

Such are the remedies and means which have usually been em-

ployed in the treatment of goitre; but of late a very efficacious medicine has been used both internally and externally in these enlargements of the neck. I allude to iodine: for internal use, a tincture made by dissolving one drachm of it in a glass mortar with two ounces and a half of rectified spirit, appears to be the best preparation, and of this the dose may be from ten to fifteen drops twice a day, but no further; as when given in over-doses, it may produce unpleasant effects, such as nausea, a sense of flatulence and sinking, dimness of vision, palpitations, indistinct hearing, tremors, and other symptoms of nervous derangement. If any such attend on a use of the medicine it should immediately be discontinued.

At the same time that the remedy is used internally, it is also to be employed externally, either in the form of liniment or ointment. The former is composed of one drachm of the above tincture mixed with an ounce of the compound soap liniment: the latter of half a drachm of iodine combined with one ounce of prepared lard. A little of either of these is to be well rubbed over the tumour every night and morning, and to be continued until it disappears, or is nearly reduced in size. If an irritation of the skin takes place, the application must be desisted from for a short time, and in future only be resorted to once a day.

Should the tumour be painful at any time, blood may be drawn from the part by the application of a few leeches. When it remains long in an indolent state, and resists the different means which have been pointed out, a trial may be made of slight electrical shocks passed occasionally through it. In young persons the above means will usually effect a cure if their use is properly persevered in; but in those cases of adults in which the tumour is soft, as also in those where the symptoms threaten a speedy dissolution by respiration being essentially interfered with, and the usual means which have been pointed out have been found ineffectual, the assistance of a surgeon may be necessary for the purpose of passing a seton through the tumour.

Throughout the whole course of the disease, the bowels should be kept in a soluble state by administering, if necessary, some gentle aperient medicine, such as a few grains of rhubarb or jalap, joined with a grain or two of the submuriate of mercury. The diet should be cooling and light, but nutritive, particularly if the complaint has arisen in a person of a scrofulous constitution.

OF THE ITCH.

Symptoms.—This disease first appears in small pimples with watery heads, which itch violently when the part is warmed either by exercise, the heat of fire, or that of the bed. By friction or scratching, the pimples are inflamed, and assume a peculiar redness. The eruptions usually appear about the fingers, wrists, arms, thighs, and waist; but seldom on the head; and are attended with so high a degree of itching, as to excite a constant desire to scratch. In

some persons there are large blotches or scabs here and there: in others there is a scurfy or scaly eruption.

Causes.—The itch sometimes is generated by filth and nastiness, by wearing the same linen a great length of time, by a number of persons cooped up together in a small dirty and ill-ventilated apartment, and by poor living and an unwholesome diet; but it more usually arises from infection, communicated by an intercourse with the diseased, either by lying in the same bed with the person, or wearing the same clothes, or handling him.

The complaint is confined to the skin, and is seldom attended with any danger, unless when it has been neglected or improperly treated. When suffered to go on unattended to, it may vitiate the mass of humours, or if it be suddenly repelled without proper evacuations, it may give rise to fevers or other diseases. If properly treated, it admits of an easy and speedy cure in most cases.

Treatment and Regimen.—Sulphur is the remedy which has been employed with the greatest success in this complaint, and it may be used not only externally in the form of ointment, but likewise internally. About a fourth part of the body may be rubbed every night with some of the common sulphur ointment, till the symptoms disappear, applying it, however, to a different part each night.

Should the simple ointment fail, a trial may be made of the following: Mix two ounces of sulphur, six drachms of the subcarbonate of potass, and eight ounces of prepared lard. Previous to its first application let the diseased parts be well washed with soap and water. About one ounce of the ointment may be used at each friction.

While the patient is employing brimstone externally in this way he may occasionally take a dose of sublimed sulphur and supertartrate of potash, (say one drachm of each,) mixed together in a little treacle or honey, so as to keep the body sufficiently open.

Sulphur when used in these ways, and properly persisted in every night, will never fail to cure the itch. The same clothes, with an exception of the linen, which should be often changed for what is clean, ought to be worn all the time of employing the ointment, and when the patient gets rid of the complaint, he should not put them on again until they have been well fumigated with brimstone, and afterwards scoured, lest the infection be communicated afresh. A better way, however, will be to destroy them altogether.

From the disagreeable smell which attends the use of sulphur, many persons are very averse to it, and therefore other remedies are occasionally substituted for it in curing the itch, but none are attended with such efficacy. Where the objections to sulphur are insuperable, the following wash and ointment may be tried. Boil one ounce of the bruised root of white hellebore in two pints of water over a slow fire, until the liquor is reduced to one pint, then pour it off clear, and add to it two ounces of rectified spirit. Put the whole into a bottle and cork it. Take white precipitated mer-

cury, one drachm, powder of white hellebore half an ounce, and prepared hog's lard, two ounces. Mix them well together.

The parts principally occupied with the eruptions may be bathed morning and night with a little of the wash, and afterwards be smeared with the ointment, and this course must be persisted in until the disorder is perfectly subdued.

In the itch as well as in some other cutaneous eruptions attended with a disordered state of the digestive organs, the diluted sulphuric acid, used to the extent of from twenty to forty drops for a dose, and repeated three times a day with a decoction of elm bark or bitter-sweet (see P. 14 and 16, Class of Alteratives,) has often produced a very good effect. If its internal use fails, it may be employed externally mixed with lard, whereby a very nice ointment is formed.

Some have been induced to make use of the common mercurial ointment in the cure of the itch, but if not very cautiously employed it may bring on a salivation; mercurial girdles are not unfrequently worn by the vulgar: but they seldom prove effectual, and may do harm.

Fumigations with sulphur, and warm baths impregnated with the same, have been much employed by the French physicians in the cure of the itch, particularly in hospitals, and they think that the disease is more expeditiously removed thereby than by using the sulphur ointment. Certainly the patient's linen is not soiled in these ways, nor does any sulphurous exhalations take place from the body.

The bath is made by adding four or five ounces of the sulphuret of potash to about twenty gallons of water, heated to about 98 of Fahrenheit's thermometer, and it is used once every day for five or ten days successively, according to the severity of the disease, the patient remaining in the bath nearly an hour each time. In severe cases, the bathing is used twice a day.

The fumigation is produced by throwing half an ounce of sulphur mixed with two drachms of nitre into a warming-pan of hot coals, employed in the usual way of warming a bed. The patient strips naked, and gets under the clothes, which are closely to be tucked round his neck and shoulders, so as to prevent as much as possible the escape of the fumes. The process is usually continued about seven nights, and the worst cases are reported to have been cured in this way without the least inconvenience to the patients.

The diet of persons affected with the itch should consist chiefly of vegetables and milk, ripe fruits, &c. together with a small proportion of fresh animal food, avoiding salted meats, high-seasoned dishes, and heated liquors.

OF A SCIRRHUS AND CANCER.

A scirrhus is a hard, knotty, and irregular tumour in some glandular part of the body, sometimes fixed and immoveable, at others less firmly attached, attended with darting lancinating pains of an excruciating nature in it, together with an increase of size and an enlargement very frequently of the veins in or about the parts affected. When the tumour suppurates and discharges matter it is then termed a cancer.

The disease often remains in the occult, or scirrhous state for some length of time, shewing itself at first like a small kernel of about the size of a hazel nut, which does not give much uneasiness; but in process of time, the tumour becomes very considerably enlarged, has darting pains extending through its substance, and at length suppuration being formed, it breaks, and degenerates into a cancer. This is an ulcer of the worst kind, with an uneven surface, and ragged and extremely painful edges, spreading in a rapid manner to the surrounding parts, discharging a thin acrimonious matter, which is very fetid and offensive, and sometimes is attended with a slight hemorrhage of blood.

Causes.—Cancer is most generally met with in persons who are advanced in life, particularly in women about the period of the menses ceasing. Those who have had no children, as also those who having had them, have not suckled them, appear to be most frequently affected with it. From several persons of one family having been afflicted with cancer, it would appear in these cases as if there had been an hereditary predisposition to the disease entailed by the parent. It has been noticed that cancerous affections are most prevalent in persons of a scrofulous constitution. In cold northerly regions, the disease is not only more frequent than in the southern parts of Europe, but seems also to be more intractable in its nature.

Any part of the body may be the seat of a cancer, but it is more generally situated on some of the glands. In women it most commonly attacks the breasts and womb; but in men it usually seizes the tongue, mouth, lips, nostrils, or parts of generation. Chimney sweepers who are arrived at the age of puberty, are subject to a peculiar cancerous affection in the scrotum from a lodgement of soot in the wrinkles of the parts, and a neglect of due cleanliness.

Scirrhus, or the first stage of cancer, sometimes arises from a blow or other external injury, such as pressure, friction, or the like, and not unfrequently from previous inflammation excited by an exposure to cold. Sometimes it may be occasioned by suppressed evacuations. Some surgeons have tried the experiment of inoculating with cancerous matter, but the disease was not communicated thereby, proving evidently that it contains no poison of a specific nature.

Symptoms.—The disease manifests itself at first with a small swelling in the gland or part affected, unaccompanied however by any discolouration or pain. The tumour increases gradually in size and hardness, becomes knotty and irregular, and in process of time is attended with darting pains of an excruciating nature, as if pierced with a sharp instrument. There is likewise an uneasy sensation in the neighbouring parts, and an enlargement in the veins thereof, as if they were unusually distended with blood. The tumour sometimes remains in this occult or scirrhous state for a length of time without much alteration ; but if it be irritated by pressure, or improper treatment of any kind, or there is acrimony in the constitution, it then extends itself to the neighbouring parts as it were in small roots or branches, the colour of the skin begins to change from a red to a purple or livid, and becomes at last very dark, and the patient complains of heat with a burning shooting pain. The skin soon afterwards breaks, and a thin acrimonious, and not unfrequently, bloody discharge takes place, which, falling on the neighbouring parts, corrodes them, and so forms a large, ill-conditioned, and unsightly ulcer. More occult cancers or scirrhi arise, and communicate with the neighbouring glands. The appetite fails, the strength becomes exhausted by a continual fever of the hectic nature, the stench arising from the ulcer is very great, the pain intolerable, and at last a discharge of blood from some part of the body, with faintings, or convulsive fits, puts an end to the patient's misery.

When the tumour, in an advanced stage of the disease, has formed adhesions to the surrounding parts, and the disease is seated in the breast, it is not unusual for one or more of the glands in the arm pit on the same side of the body to become enlarged.

A scirrhus of the womb is accompanied with a pain and uneasiness in the loins, a sense of bearing down, a mucous discharge from the private parts, and general weakness. There is likewise a fulness and sense of weight at the bottom of the belly, accompanied by shooting pains.

After ulceration has taken place, there will be a constant discharge of an offensive bloody matter ; and as the different functions of the body become more and more disordered, emaciation increases with rapidity. Towards the latter period of the disease, if the ulceration has become extensive and occupies the passage to the womb, there is frequently an enlargement of the glands in the groins, and this in some cases arrives to such a degree as to occasion a swelling of one or both of the lower extremities. It seldom happens that so violent a hemorrhage takes place from the ulcerated parts as to prove of itself fatal.

Treatment and Regimen.—The patient on being threatened with an attack of scirrhus or cancer in any part of the body, should pay a strict attention to the mode of living, and carefully avoid every species of irregularity, as also all kinds of external injury, particularly of the part affected, which ought therefore to be de-

fended from any pressure, and even from the external air, by covering it with soft flannel or fur. The diet should be light and nutritive, and abstinence be observed from all high-seasoned or salted provisions, and from all strong liquors. Moderate exercise may be taken daily, but should not be carried to the extent of producing fatigue.

As soon as a scirrhous tumour is discovered, be it seated wherever it may, some blood should be drawn from the vicinity of the diseased gland by the application of several leeches, and this opetion may be repeated frequently, suffering a few days to intervene between the applications. It will also be proper to rub in over the swelling every night, the bulk of a nutmeg of weak mercurial ointment, keeping linen rags wetted in some cooling wash (See the Class of Discutients, P. 2, 3, or 4) over the part throughout the day. The body is at the same time to be kept open and regular by any gentle laxative medicine.

It may be of some service possibly to give hemlock internally, and the best preparation we can employ is the extract. This may be taken in pills of two grains each, repeated three or four times a day, washing down each dose with a tea-cupful of the compound decoction of sarsaparilla. In administering hemlock it will always be best to begin with a small dose, and so increase it gradually, until the patient experiences some little inconvenient effects on the head and stomach, such as giddiness and nausea, when the quantity is to be lessened, or the use of the medicine be desisted from for a day or two. During the occult or scirrhous state of the disorder, hemlock may have some effect in mitigating the pain, even if it has no power to resolve the tumour; but after ulceration has commenced it will be of no avail, nor indeed will any other medicine.

Where no advantages have been derived from an adoption of the means herein pointed out, and the tumour, instead of being diminished, has become larger and harder, with evident signs of its proceeding to suppuration and ulceration, not a day more should be suffered to pass by without having the diseased parts removed with a knife, provided the tumour is moveable and not attached to a bony substance, and that its local situation does not render the operation improper.

If the diseased part is extirpated at an early period, or previous to ulceration, it may in most cases prove a radical cure; but it can answer no good purpose whatever to perform the operation after the whole mass of humours is corrupted by an absorption of the matter, and the constitution completely undermined.

To destroy the living powers of the morbid growth in scirrhous tumours, and to effect a separation of the diseased parts from those that are sound, caustic applications, and particularly such as are composed of arsenic, have been much employed by empirics; but a decided preference is due to extirpation with the knife, as both uncertainty and danger attend their removal by any kind of caustic application.

When the patient has not submitted to the operation, or the scirrhus is so situated that it could not be cut out, and cancerous ulceration has ensued, the objects to be kept in view are to correct the acrimony and offensive smell of the discharge; to shield the adjacent parts from becoming affected as much as we can; and to soothe the irritability of the sore and allay pain.

To answer the first of these intentions, the ulcerated parts may be washed with muriatic acid, diluted with three or four times its weight of water, according to the irritability of the sore and the smarting it occasions; for it should always be so far diluted, as that its application shall cause little or no pain. With the same intention, a poultice of boiled carrots scraped very fine, or a cataplasm, composed of two ounces of wood charcoal which has been fresh made, and kept in a bottle well corked so as to seclude the air, mixed with about half a pound of the common bread poultice, may afterwards be applied.

Some of the preparations of iron, when used in cases of ulcerated cancer both externally and internally, have been found to produce a speedy mitigation of the pain, an amendment in the appearance of the sore, and a correction of the offensive smell, together with a diminution in the quantity of the discharge. To assuage the sufferings of the patient it will therefore be advisable to give a trial to this mineral production.

Internally we can make use of the carbonate of iron, in doses of five grains, repeated every four or six hours; and for the purpose of obviating the costiveness, which a course of this and other preparations of iron are apt to occasion, it may be necessary to combine some cathartic with it, such as about half a grain of aloes. The whole may be formed into a pill with a little syrup, or we may give from five to ten grains of the suboxyphosphate of iron twice or thrice a day.

Externally either the carbonate, phosphate, acetate, or arseniate may be used, and the best way of applying them will be to blend them with water to the consistence of a thin paste, and cover the surface of the ulcer with this, renewing the application every twenty-four hours.

To prevent the parts contiguous to the wound from being affected by the acrimony of the discharge, narrow slips of linen, spread with some mild ointment, such as that of spermaceti, or the cerate of calamine, may be applied all round the edges of the ulcer, and a pledget of lint spread with the same be laid over the whole surface.

If the pain in the ulcerated parts is very acute, and washing it with diluted muriatic acid in the manner before mentioned, does not seem to produce any good effect, we may then substitute a strong decoction of poppy heads, in which a little opium has been dissolved. Fomenting the parts with a strong infusion of hemlock is sometimes practised to alleviate the pain, and occasionally a poultice of the same has been applied; but it does not usually afford such relief, nor take away the offensiveness of the smell, as the carrot poultice.

To ease the patient's agony and render life more tolerable while it continues, (being all that can be hoped for or expected from medicine, for cancer is to be cured by no drug,) recourse must be had to an internal use of opium, either in substance or in the form of tincture, and the dose must be proportioned to the exigency of the case and the relief it affords.

Many remedies have indeed been recommended as useful in cases of cancer, and among these arsenic has been administered; but few constitutions can bear its use, either in sufficient quantities, or for that length of time which will be sufficient to produce any considerable benefit from it. In some cases of cancer in the face and nose, half a grain of the oxymuriate of mercury (corrosive sublimate,) dissolved in a little brandy, and taken night and morning, has been found to produce a good effect.

Wort, or an infusion of malt, has also been recommended not only as a proper drink, but as a useful medicine in cancer. If used, it ought frequently to be made afresh, and about a quart of it to be drank every day for a considerable time, otherwise no benefit will be expected from it.

Setons or issues in the neighbourhood of cancers may, perhaps, be attended with a good effect, by retarding the progress of the disease, and thereby prolonging the patient's life.

In every species of open cancer, the air should be excluded as much as possible, for which purpose a covering of double oiled silk may be applied over all the dressings.

OF POISONS.

Poisons are of three kinds, the mineral, the vegetable, and the animal. Mineral poisons corrode, stimulate, or inflame, and do not destroy life until after an excruciating operation of some hours. This class consists principally of arsenic, the oxymuriate of mercury, the nitrate of silver, some of the preparations of lead and copper, alkalies, and acids, in improper doses.

Those of the vegetable class are generally of a stupefactive or narcotic quality, and some of them destroy life in a very short time. Hemlock, henbane, the deadly nightshade, thorn apple, foxglove, wolfesbane, laurel, opium, and several fungi, particularly the small agaric, somewhat resembling mushrooms, are the chief poisonous substances of this class.

Poisonous animals communicate injury by their bite or sting, and only produce their effects when the poison is received into the body by a wound, with an exception to poisonous fish, which prove destructive by their being eaten.

OF MINERAL POISONS.

Of all the poisons of this class, arsenic, and the oxymuriate of mercury (corrosive sublimate), occasion the greatest number of accidents and deaths; but as the effects produced by both are

pretty similar, what is said of the one will be applicable to the other.

When either of these mineral productions are received into the stomach, either designedly or unintentionally, it soon produces a burning pricking sensation in this organ, together with excruciating pains in the intestines, followed by a vomiting, great thirst, roughness and dryness of the mouth and throat, restlessness, and anxiety. If the dose has been considerable, and proper relief be not soon administered, inflammation takes place in the stomach and bowels, and this proceeds on rapidly to gangrene; the extremities then become cold, there ensues a vomiting of black matter, hiccups and convulsions arise, and at last life is destroyed. When the quantity of the poison is not sufficient to produce death, it is apt to give rise to tremors, palsy, or lingering hectic fever.

Treatment.—In all cases of poison, either from arsenic, oxymuriate of mercury, or indeed any other mineral whatever, it will be of the utmost importance to remove the injurious matter in the shortest possible time, and in the manner the least distressing to the stomach; and therefore the assistance of a surgeon possessed of that valuable apparatus the stomach pump should be applied for as quickly as possible. It may not be superfluous to say that it consists of an elastic gum tube, which is hollow, about a quarter of an inch in diameter, and two feet and a half in length, having affixed to it at one end a small globe of ivory with several perforations: the other extremity is adapted by a screw to a syringe of pewter or brass, of a sufficient size to contain about a pint of liquid, and having a stock cock affixed to it.

In using the apparatus, the patient is to be placed on his left side, and the tube having been passed either by the mouth or nostril down into the stomach, half a pint of water, made of a tepid heat, is to be injected by means of the syringe, and this again to be then withdrawn through the discharging tube. The injection of water is to be repeated afresh, and again to be withdrawn; which process may be gone through two or three times. The poisonous matter in the stomach will thereby be greatly diluted each time, until at length the whole of it is evacuated. This being satisfactorily effected, we may by means of the same instrument inject into the stomach the proper antidote to the poison swallowed, such as a mixture of magnesia in water for arsenic, and the white of eggs diluted with cold water for corrosive sublimate.

In all cases of poison having been swallowed, and where the apparatus above mentioned or any other of the like kind is not at hand or cannot quickly be procured, a strong emetic (see this Class, P. 7 or 8,) should be given as speedily as possible, for the purpose of evacuating the deleterious matter, drinking freely afterwards of any diluting liquor, such as mutton or veal broth, linseed tea and milk, or thin gruel, so as to wash the stomach well out, and sheathe its coats from being acted upon by the poisonous matter. Several quarts have been frequently swallowed before

the vomiting has ceased, or the poison has been effectually washed away.

With the like intention of sheathing the coats of the intestines against the deleterious matter which may have passed down into them from the stomach, previous to the employment of the stomach pump or the action of vomiting produced by the emetic, it will be advisable to administer a clyster of thin gruel or milk, mixed with an ounce or two of common oil, repeating it very frequently. If the bowels do not act sufficiently of their own accord, they ought to be opened by some laxative medicine, such as castor oil, or a solution of the sulphate of magnesia in an infusion of senna. See the Class of Laxatives, P. 11.

To neutralize any of the poisonous matter that may have remained in the stomach, it may be advisable to give the patient from time to time, a tea-cupful of a solution of the subcarbonate of potash in water, in the proportion of an ounce of the former to two quarts of the latter; or, in lieu of this, if wood ashes are more readily to be obtained, a small quantity of these may be boiled in water, so as to make it of a sufficient strength; then straining off the liquor through a piece of fine linen for the use. The carbonate of magnesia is also an excellent remedy, and may be thus administered. Mix one ounce of this and a little white sugar in one pint of distilled or common water, and give a wine glassful of it every fifteen minutes, shaking the bottle each time, accompanying the medicine by a free use of mucilaginous drinks, such as barley water, gruel, veal broth, &c. taken in small but frequent draughts, and then opening the bowels by castor oil combined with mucilage of gum acacia.

It has been found that chalk and lime water have destroyed the injurious effects of a solution of arsenic, if administered in due time; and it has been thought that they are likely even to suspend or greatly lessen the action of the poison swallowed in a solid form, if assisted by plentiful dilution.

As an antidote to the poison of corrosive sublimate, the white of egg dissolved in water, and properly diluted with the same, has been found the most efficacious and powerful of all others. After the stomach has been well washed out by the pump apparatus, or where this is not at hand, by an emetic, assisted by drinking copiously of the diluting liquors before mentioned, it will therefore be right to make use of this remedy.

Where there may be danger of inflammation in the stomach and bowels from the poison not having been quickly evacuated, and it has not yet attained any considerable height, it may be proper to resort to bleeding from the arm to a large quantity, keeping the bowels sufficiently open at the same time with frequent doses of castor oil, and applying a large blister over the region of the belly.

It sometimes happens that persons who have eaten of provisions prepared in copper vessels, from which the tinning has been worn off, are attacked soon afterwards with symptoms denoting the poisonous effects of this metallic substance. In such cases, it has been

found that sugar is a good antidote, that it allays the pain and other alarming symptoms, and in general produces several liquid stools. The exhibition of charcoal has also been found to prove very useful in such cases.

After the poison has been evacuated in a great degree, and proper antidotes have afterwards been administered to counteract the effects of any that may have remained either in the stomach or bowels, the patient should live for some time on food of a cooling and healing nature, as animal broths, gruel, milk, light puddings, and other such things of easy digestion. The drink should be linseed tea, solutions of gum acacia in milk, or barley water; but lest vomiting should be excited, or be kept up by receiving any great quantity of watery liquors into the stomach, it will be advisable to allay thirst by merely washing the mouth and throat frequently with any of these liquors in inconsiderable portions. All strong liquors of an irritating or stimulant nature, as well as all high-seasoned food, or what is difficult of digestion, ought to be carefully avoided.

To counteract the corrosive effects of the nitrate of silver, having first evacuated as much of the poisonous mineral as possible by the stomach pump or an emetic, and drinking copiously of diluting liquors, and administered laxative medicines and clysters, we may then give the muriate of soda (common salt) dissolved in water, in the proportion of a table-spoonful of the former to two pints of the latter. The patient is to continue drinking this in the quantity of a tea-cupful at a time.

In all cases of an over-dose of any alkali, the best antidote, after clearing the stomach by the stomach pump or an emetic, and drinking plentifully of diluting liquors, is vinegar, properly diluted with water.

The most appropriate remedy in cases of an over-dose of the sulphuric, nitric, or muriatic acids, or their being swallowed in a mistake, is carbonate of magnesia; this being preferable either to the subcarbonate of potash or soda. As soon as possible after the acid has been taken, the stomach is to be emptied by the apparatus before mentioned, and then the patient should swallow two ounces of a mixture of the carbonate of magnesia in water, in the proportion of an ounce or ten drachms of the former to a pint of the latter, every six or ten minutes, for the purpose of preventing the acid from acting on the coat of the stomach, as well as to favour vomiting. When the carbonate of magnesia is not at hand, half an ounce of soap dissolved in a pint of water should be substituted; for we should not give pure magnesia, as when this is suddenly added to strong sulphuric acid, prodigious heat and vapour are thereby excited.

To prevent, or obviate inflammation, several leeches may be applied to the stomach, and flannel cloths wrung out in a warm decoction of chamomile flowers and bruised poppy heads, be kept constantly over the whole region of the belly. Perhaps immersing the patient in a warm bath might prove beneficial, particular-

ly if assisted by drinking plentifully of diluting liquors, and abstaining for a time from all food. During convalescence, a return to the usual diet should be gradual.

OF VEGETABLE POISONS.

The symptoms occasioned by all poisons of this class are confusion of sight, wildness in the eyes, giddiness, loss of memory and speech, stupor, nausea, vomiting, distention of the stomach and bowels, palpitations, and convulsions. The bodies of those who have been destroyed by vegetable poisons soon become offensive, are covered with purple gangrenous spots, and usually swell very much.

Treatment.—The poisonous matter ought to be evacuated as quick as possible by means of the stomach apparatus described under the head of Mineral Poisons if to be promptly procured; but if not, then by a strong emetic, (see this Class, P. 7 or 8,) as advised under the preceding head. If the patient is in a state of complete insensibility, and incapable of swallowing, the assistance of a surgeon will be immediately necessary, as then the emetic solution must be injected into the stomach by means of an elastic gum catheter introduced into the gullet (œsophagus) from the right nostril. It is, however, only soon after any vegetable poison has been swallowed, and before it has produced stupor, loss of motion, &c. that an emetic can be administered with advantage.

The torpor or insensibility of the stomach is so great sometimes from a large dose of opium, laudanum, or other powerful narcotic, as to resist emetics of the strongest kind, however introduced into this organ; in which case it may be advisable to try the effect of a clyster composed of from twenty grains to thirty of tartarized antimony, dissolved in five or six ounces of tepid water. By introducing an emetic into the body in this way, vomiting has not only been excited, but copious stools have been procured, when the usual means have produced no desired effect.

After vomiting has been excited, the patient, if capable of swallowing, should be made to drink lemonade strongly acidulated either with lemon juice or vinegar, and this should be given in a small quantity at a time, but be repeated frequently. The vulgar opinion is, that vinegar, and other vegetable acids, possess the power of greatly diminishing, if not wholly overcoming, the symptoms occasioned by the poison of opium; but it has been ascertained by experiments made on animals, that when the deleterious matter has not been previously evacuated by vomiting, these acids, by dissolving a greater quantity of the opium, are likely to increase the malady. Such being the case, it will always be proper to empty the stomach of its poisonous contents previous to giving the patient acid of any kind.

If he is of a robust and full habit, he should be bled from the arm, or the jugular vein in the neck, which will certainly be pre-

ferable, and this with the view of obviating any dangerous determination or accumulation of blood in the brain.

In all cases where opium, or any other narcotic has been taken in an immoderate quantity, emptying the stomach of its contents by the pump apparatus, or by vomiting, should certainly be the first step taken, assisted afterwards by purgative clysters, if there is reason to think that the poisonous substance has made its way into the intestines; but if the symptoms do not yield upon the evacuation of the stomach, or should the emetic not operate speedily, if substituted from necessity to the apparatus, then I think drawing blood should be promptly resorted to. The stupor and convulsions are evident proof of oppression of the brain; and for this state no remedy I conceive can be more appropriate than blood-letting, particularly from the jugular vein in the neck.

To counteract the narcotic quality of the poison, a large blister may be applied between the shoulders, and cataplasms of mustard to the palms of the hands and soles of the feet, (See the Class of Stimulants, P. 13.) These will act by exciting a considerable degree of irritation, and their effects may be increased by giving some powerful stimulant internally, such as considerable doses of ammonia, (see the Class of Stimulants, P. 3 and 5,) together with brandy, by the tea-spoonful at a time.

The patient is at the same time to be roused, and kept awake and in motion as much as possible, by well shaking and moving him about. When he is still, different parts of his body should be well rubbed with a solution of ammonia applied with the hand, stimulating the nostrils occasionally with a small feather dipped with volatile liquor of hartshorn. It has been found that cold affusion of water copiously employed, and directed chiefly on the head and shoulders, has been attended with great success in several instances of poisoning by opium and laudanum, where much torpor and insensibility have prevailed. In such cases, the remedy ought therefore to be promptly resorted to, and be repeated frequently until the patient is sufficiently roused. It has also been recommended to stimulate different parts of the body with the down of cowhege, with the intention of rousing the patient from the state of stupor occasioned by any of the preparations of opium; but a decided preference is due to the cold affusion of water. A stimulant clyster might also prove useful, and none will be more appropriate than a solution of the tartarized antimony as before mentioned, unless the stomach and intestines have already been well cleared. If they have, a clyster composed of eight ounces of thin gruel, half an ounce of brandy, and twenty drops of the volatile liquor of hartshorn, may be substituted.

Where life is preserved, but the person remains weak and much reduced after the poison has been discharged, cordials, such as brandy and water, wine, and a light nourishing diet, should be advised.

Oxalic acid is a vegetable preparation which is much used for

various domestic purposes, particularly in cleaning boot tops, saddles, &c. Its crystals bear a strong resemblance to common purging salts, and it has been taken through mistake for the latter in several instances of late, in some of which it proved fatal by its destructive power.

In cases of this poison, the stomach should be evacuated as quickly as possible of the offending matter by the pump apparatus or a stong emetic, and drinking freely of diluting mucilaginous liquors, as in other poisons. Immediately afterwards, a mixture of chalk and water may be taken as the best antidote, for this produces oxalate of lime in the stomach where oxalic acid has been taken, which has been found not to be attended with any deleterious effect when swallowed.

As a test of distinction between oxalic acid and epsom salts, (sulphate of magnesia,) blue sugar loaf paper has been recommended: this is reddened by the former, but not affected by the latter. A simpler test, and more convenient at the same time, consists in wetting the tip of the finger, applying it to the supposed salts, and then to the tongue. If it be oxalic acid, it will taste very sour; if epsom salts, it will be bitter and saline.

OF ANIMAL POISONS.

OF CANINE MADNESS, OR HYDROPHOBIA.

This dreadful disease arises from the bite of some rabid animal, such as a dog or cat, being those which are most domesticated with the human species.

We may readily distinguish a dog to be mad by his dull heavy look, endeavouring to hide himself and seldom barking, and yet he snarls at strangers, but fawns on his owner: he hangs down his ears and tail, refuses his food, droops, and often lays down as if going to sleep. Soon after this he begins to breathe quick and heavy, shoots out his tongue, slavers a good deal, and froths at the mouth; looks half asleep, flies suddenly at the by-standers, and runs forward in a curved line. As these symptoms increase, his eyes are dim, and water like tears runs from them, his tongue is of a leaden colour, he becomes faint and weak, and often falls down, then rises and attempts to fly at something, and at last he becomes furious and mad. The animal seldom lives above thirty hours after the disease has arrived at this stage. The nearer to this state, the more dangerous is the bite and the more direful its effects.

The general symptoms attending the bite of a rabid animal in the human species, are as follow.

A short time before the distinguishing appearances become manifest, the patient is affected with languor, general uneasiness and heaviness, disturbed sleep and frightful dreams, accompanied with tossings of the body, sudden startings, sighing, anxiety, and a desire for solitude. These symptoms most likely will continue through

the whole course of the distemper, but with a daily aggravation. Pains then begin to shoot from the place where the wound was inflicted by the animal, quite up to the throat, with a straightness and sensation of choaking, and a dread, or horror at the sight of water or other liquids, together with temors and a loss of appetite. The person affected can, in general, swallow any thing in a solid form which is soft, but when his lips come in contact with a fluid, he starts back with the greatest repugnance and agony, as if seized with a convulsive spasm. He complains of a pain at the bottom of the chest, and mournfully points to that part as the seat of the disease.

Here I beg leave to observe that dogs afflicted with madness evince no such dread of water; for, instead of showing any, they seek it in most instances with avidity, and lap it eagerly. What therefore has been considered as marking the disease in the brute species is highly erroneous, and may be productive of much evil by lulling into dangerous security persons bitten by dogs actually rabid. Another very absurd popular error is, that by worming a dog (which is merely removing the bridle from the tongue) he is thereby prevented from being liable to the disease.

When hydrophobia has arrived in the human species to the stage which has been described, a fever with considerable heat comes on, attended with continual watching, and sometimes with priapism; the tongue becomes dry and rough, and often hangs out of the patient's mouth, his voice is hoarse, the thirst very considerable although he cannot venture to drink, he spits at the by-standers, has an apparent desire to bite such persons as he can come at, but has still the sense to beg they would keep from him for fear of an accident of that kind; he cannot bear the least current of air; he rages and foams at the mouth. At length his pulse sinks, and breathing fails, cold clammy sweats come on with convulsions, and these close the tragic scene.

Causes.—Canine madness, in my opinion, may come on spontaneously in dogs, foxes, wolves, &c. from feeding on food in a highly putrid state, severe exercise during very sultry and dry weather, a deficiency of water to assuage thirst, or some peculiarity in the atmosphere, similar to what produces epidemics of other kinds in the brute species. There are some medical practitioners however who think that actual infection from a diseased animal by inoculation of the poison through a bite is the only cause which is capable of producing or exciting the disease.

It is very uncertain how long hydrophobia will take to manifest itself in the human species after the communication of the infection from a rabid animal, but it is usually a considerable time. In a few instances it has commenced in eight or ten days after the accident; but generally there is no apparent change in the patient's health for thirty or forty days, and indeed six or even nine months have been known to elapse before any symptoms of it have appeared. The wound inflicted by the animal sometimes

heals without any difficulty, but at others it resists all healing applications, forming a running ulcer.

It is a fact that symptoms very closely resembling hydrophobia have been brought on by violent emotions of the mind in irritable and delicate habits; and that a similar aversion to liquids and difficulty in swallowing them have been noticed in hysterical women. Some cases of general cramp (tetanus) in which there has been much local irritation in an excitable habit, conjoined with a disturbed state of the passions, may, by exhibiting symptoms exactly corresponding with hydrophobia, have been mistaken for it. When, therefore, canine madness is reported to have occurred at the distance of many years from the period at which the poison has been supposed to be communicated, the natural conclusion is that a rabid animal has had no share in producing it. There are no well authenticated cases of the poison having laid dormant longer than ten or twelve months, if so long, and if a person continues perfectly well for this period of time without any symptom of the disease, we may consider him as perfectly secure and safe.

The power of medicine, and all possible aid will avail nothing after hydrophobia has once manifested itself in the human frame, and death commonly takes place on the third or fourth day from the symptoms of the disorder becoming apparent.

Treatment.—To prevent an accession of the disease, the wounded part should be completely cut out as soon after the accident as possible; but when this cannot be done promptly, the excision may be performed even some days after the patient has been bitten, rather than omit it altogether, as there are just grounds for presuming that the poison of a rabid animal does not enter the absorbent system so quickly as a variety of others are noticed to do. The wounded part being cut out completely, then apply a cupping glass with previous scarifications; after which wash the parts well with salt water and vinegar, or with a solution of ammonia in water (say two drachms of the former to six ounces of the latter); then cauterize the wound with the nitrate of silver or fused potash, which will occassion a slough, and afterwards a discharge of matter. This should be promoted for some weeks, by sprinkling a little red precipitate occasionally into the ulcer, and dressing it with resinous ointment morning and night.

If the part wounded by the teeth of the animal cannot be excised from its situation, or the patient will not submit to the operation, the parts must be well washed as before mentioned, then be scarified, and a free discharge of blood promoted by a cupping glass, bathing the wounds well afterwards with warm water. This being done, the bitten part is to be well cauterized with fused potash or the nitrate of silver, and a proper discharge kept up for a considerable time. A strong solution of arsenic in water has been recommended as an excellent wash for wounds inflicted by rabid animals; this having been found to possess the power of destroying the poison, and thereby preventing hydrophobia from taking place.

I here repeat the necessity of cutting out the wounded part if possible, this being entitled to a decided preference over that of cauterizing it, and being the only certain preventive means that we are acquainted with, although success sometimes attends the latter. One or other of these steps having been adopted, the patient should immediately proceed to a use of mercury, both internally and externally, so as to excite some degree of salivation very speedily. With this intent, a pill, consisting of two grains of the submuriate of mercury, or five of the mercurial (vulgarly called the blue) pill, may be taken every night and morning, whilst at the same time a drachm of the strong mercurial ointment should be rubbed into the thighs every evening, a little before bed-time. By using a warm bath occasionally the effects of the mercury may be expedited.

As a means of prevention, cold sea bathing is much practised, particularly among the lower class: but I think a decided preference is due to a mercurial course after the wounded part has been properly attended to.

If the patient is of a full plethoric habit of body, some blood may be taken away, and the bowels afterwards kept open with any cooling purgative, but not so much so as to interfere with or counteract the effect of the mercury on the salivary glands. He should strictly observe an abstemious regimen, refraining from animal and high-seasoned aliments as well as all strong liquors, and living on vegetables, broths, milk, &c. He should carefully guard against all passions or other emotions of the mind, and have his spirits supported under the impression that no ill consequences will ensue from the accident.

Should his nights be restless or uneasy in consequence of his apprehensions, a composing draught (see the Class of Anodynes, P. 6,) may be swallowed an hour or so before his retiring to bed; and during the day he may take, every four hours, thirty drops of æther in one ounce and a half of camphor mixture, or a draught of musk, &c. See the Class of Antispasmodics, P. 4.

Various medicines, under a disguised form, particularly the Ormskirk remedy, have been recommended to the public both for their preventive and curative powers in hydrophobia, but they should only be looked upon as gross impositions. The disease can only be prevented by excision or caustic, with the other means which have been pointed out. When it has fully manifested itself in the human body, we are as yet unacquainted with any remedies that will effect a cure; the destruction of life is the inevitable consequence. Whatever is done should therefore be resorted to speedily, and before any symptoms of the disease become apparent; nay, as soon as possible after the infliction of the wound.

It has been thought by a few physicians, that even after some symptoms of the disease have made their appearance, the wounded parts should be cut out; or if the patient is bitten in a part that could be cut off, a cure might be effected, under the supposition

that the cause still remains in the wounded tendon, and not in a diffused infection through the absorbent vessels tainting the blood.

Considering medicine as wholly inefficacious in hydrophobia after it has perfectly manifested itself, it only remains to observe, that during the furious stage of the disease, the greatest care must be taken to render the patient incapable of doing any injury either to his attendants or himself, by means of a strait waistcoat or leathern belt, as noticed under the head of insanity. If he is capable of swallowing, his strength must be supported by things of a light and nutritive nature in a solid form; but if deprived of the power of deglutition, clysters of animal broths, frequently injected, should be substituted. To assuage his thirst under the like circumstance, his mouth and nostrils may be wetted from time to time with a sponge dipped in tepid vinegar and water.

OF THE POISON OF THE RATTLESNAKE AND OTHER VENEMOUS SERPENTS.

I now proceed to notice the bites of venemous serpents, the viper, adder, scorpions, wasps, moschetoes, &c. not neglecting at the same time to make mention of the deleterious effects of some species of fish.

The symptoms which attend on the bite of a rattlesnake and such other venemous reptiles, are sickness at the stomach, swelling of the whole body, the eyes much suffused with blood, a full, strong, agitated pulse, severe pains exciting much groaning, and chattering of the teeth; sometimes copious bloody sweats break out, and occasionally hemorrhages from the nose and ears; lastly death ensues.

The best and safest mode of treating the bites of all venemous serpents is to cut out the injured part as quick as possible, then to wash the wound well with warm water so as to encourage its bleeding freely, and when the blood has ceased flowing, to wet the parts freely with a solution of ammonia, or even strong soap lees. To allay irritation and pain, opium in substance, or its tincture, should be given internally in sufficient doses, and be repeated so as to produce the desired effect. In the East Indies, where persons labouring in the fields are very apt to be bitten by venomous serpents, the succinated spirit of ammonia is used internally, as well as externally, in the proportion of a tea-spoonful to a wine glass filled with water; and by being repeated a few times, has been found to be attended with a very good effect.

The symptoms which attend the bite of the viper are, the wounded parts being highly painful, very much swelled, and at first of a deep red colour, but afterwards becoming livid, and the neighbouring parts acquiring the same hue. Constitutional symptoms then make their appearance, the person becomes faint, nausea and vomiting take place, the skin acquires a yellow tinge, the pulse sinks and intermits, and not unfrequently life is destroyed.

A pretty similar treatment should be adopted for the bite of a viper, as has been recommended in that of the rattle or other venomous snakes, viz. destroying the virulence of the poisonous matter which has been inserted into the wound by excising the part, encouraging a flow of blood from it afterwards by scarifications and a cupping glass, and then washing it well with the succinated spirit of ammonia, &c. giving likewise a little of it internally from time to time, and allaying pain and irritation by opium, or its tincture (laudanum), in sufficient doses.

It has been supposed that the absorption of the poisonous matter into the constitution from the wound, may be somewhat retarded by passing a tight ligature round the limb above the part that has been injured, and therefore this step may be adopted as soon after every accident of the like nature as possible, and previous to the excision of the part; which operation ought always to be preferred to simply cauterizing it either with the fused potash or the nitrate of silver.

With regard to the bites of venomous insects, as the bee, wasp, moscheto, scorpion, centipede, &c. (the three last of which occur very frequently in tropical climates) the best treatment that can be adopted, is to keep small pledgets of linen wetted in tincture of opium to the parts which are stung. If this does not afford ease, a solution of the subcarbonate of ammonia, or a solution of the acetate of lead well diluted with water, may be substituted. Olive oil is occasionally used as an external application; but it does not usually relieve the heat and pain of the sting so readily as the tincture of opium or other remedies, which have been pointed out.

OF POISONOUS FISH.

Some kinds of fish, such as herrings, eels, muscles, lampreys, and even lobsters occasionally, give a singular irritation to the system, independent of their being stale or somewhat putrid, and during their digestion in the stomach, excite a considerable redness or efflorescence in the skin in different parts of the body, and this occasionally is accompanied with a febrile disposition, all of which soon subside again without requiring the aid of medicine.

The shores of many islands in the West Indies, and other places, are frequented by fish of a very poisonous quality, and many persons lose their lives by eating them. It is, indeed, a very curious circumstance, that the same species of fish which is safe and wholesome food at one period, is frequently very pernicious at another; so that with respect to their safety there is no certainty.

The fish most to be dreaded are the yellow billed sprat, the rock fish, cavallee, barracuda, and king fish. The conger eel and large land crab, that feed on the leaves of the manchineel tree, are

likewise very frequently poisonous, and produce severe vomiting and purging.

The poisonous or deleterious effect of these fish may, I think, be justly attributed to the food which they take, although other causes have been assigned. The poison seems to lie in their intestinal canal, the muscular parts being slighty tinctured by the chyle and blood conveyed to them ; because, when the precaution is taken to gut the fish as soon as it is removed off the hook, or taken in a net, it seldom or never produces any ill effect, or at the most only in a very slight degree, if even of ever so poisonous a nature. The longer the fish remains out of the water without this precaution being taken, the more violent generally is the poison.

The symptons which attend on the eating of poisonous fish are as follow :—After a few hours, the person is attacked with heaviness, languor, and faintness, succeeded after a short time by great restlessness, giddiness in the head, flushings in the face, sickness at the stomach, vomiting, and griping pains in the bowels, followed by a purging. There is the sensation of a burning heat over the whole of the body, but particularly in the palms of the hands and soles of the feet ; which is occasionally accompanied by an efflorescence, resembling the nettle-rash. In some cases, the patient experiences a heat and difficulty of making water, or a frequent desire to go to stool. At first, the pulse is usually frequent and hard, but it soon becomes low and feeble. In the advanced stage of the occurrence, the surface of the body acquires, in some cases, a deep yellow hue, similar to what takes place in the jaundice ; and both the perspiration and urine are tinged of the same colour.

Where the fish is of a very poisonous nature, (as is the case with the yellow billed sprat in particular) or where a considerable quantity has been eaten, the person is very soon destroyed, and usually goes off in strong convulsions. Where death does not ensue, and the dangerous symptoms at last subside, the patient will be left in a weakened and reduced state, the cuticle of the palms of his hands and soles of the feet will peel off, his hair will drop, his body become emaciated, and he will occasionally feel acute pains in the joints of the wrists, knees, and ankles.

The treatment to be adopted in cases of having eaten poisonous fish of any kind, is to evacuate the deleterious matter as quickly as possible by a smart emetic, if no vomiting prevails spontaneously ; but where it does, it may be sufficient to assist it by making the person drink copiously of diluent liquors, such as thin gruel, barley water, chamomile tea, &c.

The stomach being cleared of the offending matter, it will be advisable to evacuate the intestines of their contents by a dose of castor oil, which will likewise sheathe thier coats against the acrimony of the poison. If the stomach will not retain this, and there is no spontaneous purging, it will be necessary to give, in

the form of a pill, a few grains of the subcarbonate of mercury (calomel) conjoined with the extract of colocynth. See the Class of Purgatives, P. 3.

The administration of any sedative, such as opium, under the presumption that the morbid irritation requires to be allayed, might in severe cases be a fatal practice.—Stimulants, cordials, and tonics appear to be the most proper remedies, after vomiting has ceased and a purging supervened; half a tea-spoonful or so of Cayenne pepper in a wine glassful of brandy, with an equal quantity of water, will be found to arrest the morbid irritation and counteract the exhaustion of the system. If brandy is not at hand, rum or any other spirituous liquor may be substituted.

To obviate the debility which has been induced by the occurrence, and restore energy to the system, the patient, on the going off of the violent symptoms, must enter on a course of strengthening medicines, various forms of which will be found under the head of the Class of Tonics. If the pains in the joints still continue and give annoyance, the parts should be covered with flannel, a tepid bath be used occasionally, and the compound decoction of sarsaparilla be drank in the quantity of a pint daily. If the skin is dry and hot, about ten grains of the compound powder of ipecacuanha may be taken on going to bed, drinking some tepid liquor after it to assist in promoting a gentle perspiration.

The only test on which a reliance ought to be placed in discovering whether fish of a suspicious kind is poisonous or not, is by gutting it and giving the entrails to some animal, such as a cat, dog, or duck. If it sustains no injury, and appears well after the expiration of a couple of hours, then the fish may be considered as having no injurious quality.

When any ill effects arise from having eaten eels, muscles, oysters, lampreys, &c. an emetic should be taken as quickly as possible; after which, either milk, or liquors strongly acidulated with vinegar, may be drank.

OF THE MANAGEMENT OF CHILDREN AND THEIR DISEASES.

OF CHILDREN AND THEIR MANAGEMENT.

A grand requisite for possessing a good constitution is to be born of healthy, vigorous, and virtuous parents, in the prime of life, and whole intercourse is the result of mutual and ardent attachment. The resemblance of children to their parents in features and stature is an irrefragable proof of a certain conformity of structure; and as this is manifested in the external parts, it would be absurd to suppose that the structure of the interior of the body had not its share in the conformity.

It is an undoubted fact that the natural health of children depends greatly on the parents, particularly the mother. It is she

who during the period of gestation dispenses in a great measure life or death, infirmity or strength, a weakly or robust constitution, a sickly life or healthy old age. The latter is greatly promoted, when, during the period mentioned, she avoids all mental emotion, takes due care of her health, and abstains from every indulgence inconsistent with the moderate exercise of her bodily powers.

It is always best when children grow slowly and uniformly, and do not shoot up too rapidly, as few persons of extraordinary stature or size are at the same time strong, vigorous, and healthy.

The immense proportion of children who die in the infantile state cannot but afford great regret; for it appears by the general bills of mortality, that no less than one half of those born in this country die before they attain the age of seven years.

The principal cause of this may, in my humble opinion, be attributed to the very injudicious manner in which they are managed when in health, and the imperfect and inadequate means resorted to when they are attacked by sickness and disease. Few of the brute creation perish until the natural limit of their existence is completed, because, guided only by instinct, they comply with the dictates of nature; while man, the child of art and refinement, proud of his boasted reason, is very liable to run into error. Modern refinement may have afforded society many signal advantages; but it is an undeniable fact, that the life of man has certainly been abridged thereby, for, in an uncultivated state, he is not only exempt from a variety of disorders to which the civilized world is subject, but rarely dies until his natural course is run.

The only way to make children strong, vigorous, and lively, is to pay proper attention to their management and health. How to feed them with wholesome and nourishing food; how to cleanse them from all impurities by proper ablutions daily, and dress them so as not to hurt, cramp, or confine their motions; and how to give due exercise to their tender bodies, so as to promote their growth and strength; are therefore objects of the greatest importance in the rearing of children.

These points I shall proceed to enlarge upon, and, first,

OF THE FOOD OF CHILDREN.

About the third day from delivery, the secretion of the mother's milk begins to take place, and in a day or two more, if properly encouraged, there will be a tolerable copious supply of it, so as to enable the mother fully to discarge her duty to the infant. The breast milk, it will therefore be supposed, is the most natural, as well as the most salutary kind of food for it; and which from its nutritious quality, and being most easily digested in its tender stomach, should never be denied it unless imperiously forbidden by any cause which can justify such an unwarrantable practice.

This, however, is not sufficient to prevent some mothers from attempting to bring up their children without the provisions prepared and pointed out by nature, and on the most trifling incident they decline or hastily give up this part of their duty; the consequence of which is, that the infant is either placed under the care and management of a wet nurse, or it is brought up by the hand as it is termed.

An unnecessary and voluntary refusal to suckle on the part of the mother, evinces a want of the tenderest feelings and natural affections for her new-born babe. But it does not merely implicate a dereliction of duty, it likewise involves an evasion of the strongest impulses of the human heart; it occasions a transfer of filial affection, gratitude, and obedience from the mother to a hireling, who cannot appreciate their value. Who is prepared to say what may be the result of this transfer? After a denial of this natural nourishment, after bereaving the babe of his only present birthright, is it at all surprising that instances of filial estrangement should occur, or, when once produced, that it should become permanent? Though human institutions admit of rank and degree in society, the Divine will has ordained that all women shall be equally liable to the pains of childbirth and its consequences. Milk, therefore, flows alike into the breasts of the princess and the peasant, and frequently into those of the former in greater abundance, owing to a more nutritious diet and other comforts. It must therefore be repelled or absorbed under the risk of suppuration and febrile affections, as well as the repeated exhibition of nauseous purgatives. That woman who unnecessarily and voluntarily declines the engaging office of suckling her infant but ill consults her future health.

It very rarely happens that women are incapable of suckling their own children, although there may be cases where it would not be advisable. Women of a naturally delicate frame, even if they had the inclination, could not put it in execution with impunity; and even when they do make the attempt, and by perseverance are able to accomplish it, their children are often puny and debilitated; or from the want of the proper nourishment in the mother's milk, they die at a very early age. It also frequently happens that certain diseases, such as occasional mental derangement, scrofula, and the like, exist in the female branches of a family, which would render it improper for mothers so circumstanced to suckle their children, lest the predisposition in their offspring to these maladies might thereby be considerably increased.

One of the first objects into which a woman who does not suckle her child ought to enquire, when she is under the necessity of entrusting it to a wet nurse, is, how long she has lain in, and consequently, how far it may be probable that her milk will agree with the child. The human milk, when properly adapted for an infant, will be found on examination of a very fluid consistence, of a sweet pleasant flavour, and in colour of a pale blue, and almost clear.

As it becomes advanced in age, it then undergoes a change in most of these respects; its colour is more opaque and whiter; it appears more gross, heavy, and impregnated with oil, and it will have somewhat of a saltish taste.

If, therefore, an infant newly born is placed under the care and management of a wet nurse to suckle it, if her milk be not proper from her having been lately delivered, it will stand a great chance to disorder it; because, if she has lain in six, eight, or twelve months, during which she has either suckled her own child or some other, her milk has become too rich and mucilaginous for the stomach of a new-born infant, whose digestive faculties are weak.

The woman who is chosen for a wet nurse, when the mother of the child cannot suckle it herself, ought to have been delivered pretty much about the same time with her; she ought to have a good supply of the secretion of milk in her breasts, to be perfectly free from all eruptive humours, her constitution exempt from a scrofulous disposition, herself and near connexions from mental derangements, and she should be in the enjoyment of perfect good health. Moreover, she should be cleanly, sober, temperate, and of a cheerful and active disposition.

She should keep the child awake by day as long as it is disposed to be so, and by no means whatever give it any anodyne medicine to make it go to sleep, or continue it long in this state to save herself the trouble of exercising it, or prevent her own rest being disturbed through the night, a custom too much practised by wet nurses. Another injurious custom with nurses, as also with mothers, for the purpose of tranquillizing infants and putting them to sleep, is by rocking them violently in their cradles. Such violent agitations are injurious to an infant, and have been known to produce bad consequences. If cradles are ever used they should only be employed as small and convenient beds; but a crib placed close to the bedstead of the nurse or mother will be a superior accommodation for the child. An infant should never sleep in the same bed with the person who nurses it, lest it be overlain, an accident that does sometimes occur. If the nurse has her own child also to support with her milk, it will be prudent to begin at an early period with feeding the infant entrusted to her care to a certain extent, as she will not be likely to have milk enough in her breasts for the support of both.

A child soon after its birth usually shews an inclination to suck, and it should be gratified, although there is not always milk in the mother's breasts, but this is the way to bring it: moreover the first milk that the child can obtain from the breasts will answer the purpose of cleansing its bowels of the meconium (a green excrementitious substance found in the intestines of all newly born infants) better than any laxative medicine, and will at the same time prevent inflammation of the breasts, the milk fever, and other diseases incident to women soon after delivery.

If the mother, or nurse, has a copious secretion of milk, the child will stand in need of no other food for the first three or four months. It may then be proper to give it once or twice a day, a little of some food that is easy of digestion, and in a thin and liquid form, such as common milk and water warmed to the temperature of that of the mother's, thin gruel made from grits, pearl barley, or arrow root powder mixed with about a third part of cow's milk, which may occasionally be changed for thin pap made with flower, bread, or biscuit, having a due proportion of fresh milk added thereto; but these should first be passed through a lawn sieve, to insure their being thin and smooth. All food which is prepared by art for the child should be made daily, and none of that of the preceding day be used, lest it should be inclined to sourness, when it would not fail to disorder the child's stomach and bowels.

Well baked bread is a valuable article of food for children, and a good way of preparing it as such, is by boiling it in water, then pouring this off, and adding a proper quantity of new milk unboiled, taking care to mash the bread well to prevent its being lumpy.

If the food is liquid, it may be given to the child by means of a bottle or horn, the mouth of which is covered with parchment, and perforated with several small openings, so as to imitate in some degree a nipple. This will give occasion to a little exertion in sucking, imitative of what we see in nature; and is moreover attended with the advantage, that the child will not be gorged, or take more than it wants, as is too frequently the case when it is fed with a spoon. The greatest care should always be taken that its stomach may neither be oppressed with excess of food nor be disordered with what is improper. Nurses are indeed too apt to cram food down an infant's throat as often as it awakes from sleep, or cries, thinking to quiet it thereby.

For children that are brought up wholly by the hand, or partly so, from a deficiency of milk in the breasts of the mother or nurse, it may be advisable when they are five or six months old to make their diet a little more generous, by mixing the bread in chicken or veal broth, or even in beef tea, and occasionally a plain light pudding may be substituted. When they are weaned, or have got teeth, they may be allowed a small portion of some animal food which is easy of digestion; but this should be given sparingly at first, and be always cut up very small, and mixed with a proper quantity of vegetable food, such as mashed potatoes, rice, or bread grated fine.

After a child is weaned, it ought to be fed four or five times a day; but it should not have too much at a time, nor be accustomed to eat in the night. Due attention must be paid that the child's stomach be neither overloaded with food, nor that it is not debarred of a sufficient quantity of what is nutritive and wholesome. The most proper drink for a child is water: the practice of giving

it ale, or other fermented liquors at its meals, seldom fails of being injurious. Where children are very weakly and disposed to be ricketty or scrofulous, a little wine, well diluted with water, or fine small beer, may be allowable.

Ripe fruits are generally of a cooling nature, and correct the tendency to febrile heat as well as the acrimony of the humours; but few things prove more hurtful to children than unripe fruits, and it has been observed that they are generally more indisposed with stomach and bowel complaints in the fruit season than at any other, owing, no doubt, to the fruit which is sold in the markets being too frequently in an unripe state. Those who are entrusted with the care of children should be particularly careful in only allowing them to eat a moderate quantity of what is perfectly ripe.

It is likewise too common a practice both with mothers and nurses to give children their bread thickly spread with butter, and not unfrequently this is covered with sugar also. The less butter, or any other fat or oily substances, that a child eats, the better. Honey will be a good substitute.

The diet of children need not be confined to any one particular article; it may be changed from time to time, taking care that it is simple, of a wholesome quality, and neither too abundant nor defective in quantity.

OF THE CLOTHING OF CHILDREN, AND CLEANLINESS.

It is too common a practice with nurses and mothers to swathe very young children with flannel bandages and stays, the consequences of which are, that they either become very susceptible to the impressions made by the external air when they are left off, or deformity takes place.

The best rule that can be observed with respect to the dressing of a child, is that it be encumbered with no more clothes than are necessary to keep it warm, in every instance proportioning these to the temperature of the atmosphere, the season of the year and climate; that they sit easy and sufficiently loose on its body, so as not to compress and confine any part of it; that they are composed of articles that are light, soft, and warm, being at the same time simple and without complication, and that they be changed frequently, or as often as they happen to be wetted by the urine of the child. Wet clothes not only fret and gall the tender skin of infants, but also give them a strong unpleasant smell, and not unfrequently occasion eruptive disorders; whereas cleanliness in the clothing of an infant, together with proper ablutions with tepid or cold water, and frictions with the hand over every part of the body after it has been thus purified, each day previous to dressing it, will greatly tend to preserve it in good health. In every part of the dress of an infant, as well as in the application of its napkins, tape should be substituted instead of pins.

OF THE EXERCISE OF CHILDREN, AND PURE AIR.

No child will be truly healthy who does not get proper exercise; for this is absolutely necessary to the growth, strength, and health of all children. Infants, when in health, are seldom long together in a quiescent state, except when asleep; and it is happy for them, that this active principle, with which nature has endowed them, is so vigorous, that they will hardly ever submit to it. It clearly points out how much they stand in need of bodily motion or exercise.

Children may be properly exercised in various ways. When they are very young, this is best done by carrying them about in the nurse's arms, changing their position frequently to prevent any tendency to deformity, and occasionally jumping them about. Another kind of exercise peculiarly adapted to infants, is that of rubbing every part of the body well with the hand each time they are dressed and undressed. No opportunity should be passed by of performing this act of kindness to them every time that their clothing is changed, and it may always be made after the application of cold water to the body, with the view of adding to their strength and vigour, and promoting the due circulation of the blood. By neglecting to give due exercise to children, as well as by suffering them to lie in a cradle or bed with wet clothes about them, they are apt to become puny, weak, and ricketty.

In putting children on their feet, we should follow the dictates of nature as the best and most unerring guide. If the motions and actions of a child in health be attended to, it will be observed, that in proportion as it acquires strength it will not only be almost always in motion, but will soon make attempts to help itself by the use of its hands and feet, and be crawling about wherever it is permitted. From this mode of exercise, it will soon be invigorated by an additional supply of strength; and whenever it is upheld by the arms and freed from the weight of its clothing, at the time of dressing and undressing, it will naturally attempt to walk up the lap or waist of its nurse or mother.

We all well know that the most remarkable effect of habit is to diminish gradually the sensibility of the organs, and that an habitual exposure to atmospherical vicissitudes produces this result in the most salutary degree. To this object, therefore, should the attention be particularly directed in the management of children; for in proportion as it is attained, the action of the functions will be more complete, and health and vigour be infused in the system.

Young children should be carried much into the open air, which will greatly tend to invigorate their bodies, and gradually inure them to endure cold, whereby they will in a great measure be guarded against many complaints which arise from too great a

susceptibility of atmospherical vicissitudes. Children brought up in the country, particularly those of the poor, who scarcely know what it is to remain long at the fireside, and who, although they spend much of their time in the open air, are for the most part lively, healthy, robust, and strong; whereas, those of parents in a better condition of life, who are so over-careful of their children as to confine them a good deal within doors, are often delicate, puny, and sickly.

In a climate so variable as ours, some degree of caution is however requisite, and parents should direct those who are intrusted with the care of their infant children, not to keep them in the air too long at one time, as this frequently subjects them to take cold.

To render young children healthy and strong, it is not sufficient that they be taken into the air; they should feel the exercise resulting from being carried and tossed in the arms of their nurse or attendant, and as they become strong enough to bear it, be put on their feet, and partake of such exercise for a reasonable time, as shall keep them in a moderate glow of warmth.

The chamber which is appropriated for the nursery ought to be large and airy; for where many children are confined together in a small apartment, with perhaps two or three beds in the room, the air not only becomes unwholesome from being repeatedly inhaled, but the heat produces unnecessary perspiration, relaxes the muscular fibres, renders them feeble and delicate, and predisposes them to repeated colds when they are sent out to enjoy the benefit of the air.

Young children should be amused throughout the day when in the house, be tossed well about in the arms of the nurse, and be suffered occasionally to crawl about the floor, by which means they will sooner acquire the proper use of their hands and feet. Moreover, they should not be permitted to sleep much throughout the day, that they may be more likely to have good rest by night. Cradles for children have been condemned by many physicians on account of the improper use made of them very frequently by nurses. A crib, so constructed as to be capable of being fixed to the side of the nurse's bed during the night, and to be easily carried from one room to another in the day-time, is certainly entitled to a preference.

OF THE DISEASES OF CHILDREN.

OF STILL BORN INFANTS.

Infants are sometimes born without shewing any appearances of life, but where this, at the same time, is only suspended, not totally annihilated, the apparent cessation of the action of the heart and lungs may be owing to a variety of causes, such as universal weakness of the vital powers, collections of glairy matter in the wind-

pipe, or a congestion of blood in the lungs, arising either from a long-protracted labour and consequent detention of the head in the passage, or the neck of the infant being tightly encircled by the navel string or the mouth of the womb, so as to stop the circulation of the blood.

When the infant shews little or no signs of life after a tedious labour, it ought to be cleansed and then be wrapt up in flannel, having first well rubbed its chest with volatile spirits mixed with brandy, and stimulated its nostrils with volatile salts. Should these means fail in re-animating it, we may introduce a pipe or flexible catheter into its mouth, and thereby endeavour to fill the lungs with air, and make them perform the office of respiration, which plan ought to be persevered in for a considerable time. Besides these means, the infant may be immersed in a warm bath, in order that a proper degree of heat may be restored to its body. In all such cases it will be of the utmost consequence also not to detach the after burden too soon from its connexion with the womb, and not to be in a hurry to apply a ligature on the navel string. These are the first steps to be attended to.

If a portion of the glairy fluid in which the child floats in the womb gets into the windpipe or the mouth, and renders the breathing difficult or rattling, its throat ought not only to be well rinsed and washed out, but it should be placed in an attitude that will facilitate the discharge of the fluid; that is, by laying its head lower than its body. This being done, endeavours should be made to reanimate the infant; first, by inflating the lungs in the manner before mentioned, and then pressing on the chest to extricate the air, imitating thereby natural respiration.

Where there is either stupor present, or congestion in the lungs, it will be advisable to lessen the determination of the blood to the head or chest, by suffering a small quantity of blood to be lost from the divided navel string prior to putting a ligature round it.

OF A RETENTION OF THE MECONIUM.

The bowels of all infants at the time of their birth are filled with a blackish coloured and viscid matter of the consistence of syrup, known to professional men by the name of meconium. The efforts of nature are in general sufficient to dislodge and carry it off, if assisted by the mother's milk, which is always at first of a laxative quality, and therefore infants should be applied to the breast as soon as they shew an inclination to suck. But should it be retained, or not sufficiently carried off, a small tea-spoonful of castor oil or a little magnesia may be given, particularly if the secretion of milk in the mother's breasts is rather tardy.

OF ACIDITIES, FLATULENCY, AND GRIPES.

The species of food most commonly employed for the nourishment of children, being of an acescent nature, is apt to turn sour on the stomach, particularly if the body be any way disordered. Hence most of the complaints of children are accompanied with evident signs of acidity, such as flatulency, griping pains, and stools of a green colour. The child so affected becomes restless, cries much, and draws up its legs forcibly to its body, is troubled with sour belchings, vomiting or purging, and not unfrequently becomes convulsed.

To remove the offending matter, it will be necessary to give the infant about five or six grains of magnesia and two of rhubarb, mixed in a little peppermint or carraway water. The medicine at the same time that it occasions a gentle operation of the bowels, will tend to correct the acidity, by which means it not only removes the disease but obviates its cause. If necessary, it should be repeated the succeeding day, being far preferable to prepared chalk and such other medicines, which, although they correct the acidity, are apt to lodge in the bowels and occasion costiveness.

A costive habit is, indeed of itself, a frequent cause of flatulency and griping pains in infants, and when it occurs ought to be obviated, by administering the above medicine. If not found sufficiently active, fifteen or twenty drops of the compound tincture of senna may be added. When the griping pains are very acute, warmth may also be applied externally to the stomach and bowels, by fomenting them with flannels wrung out in warm water.

In infants who are brought up by the hand, it will be necessary to pay the strictest attention to their food, and carefully to observe what seems to agree best with them. Such infants are very apt to be troubled with acidity and flatulency in their stomach and bowels, and therefore it ought to be prepared fresh once or twice a day, and to have a few carraway seeds inclosed in a small bag, boiled up in whatever farinaceous substances are given to them as food. Where pap, arrow root, or the like productions do not seem to agree, the crumb of bread mashed very fine in a little chicken broth or weak beef tea may be substituted occasionally.

GALLING AND EXCORIATION.

Young children are very apt to become excoriated in particular parts of the body, particularly about the groins, and wrinkles of the neck, behind the ears and under the arms, such places being kept much moistened by urine or sweat.

These complaints prove very troublesome to children, and are, in some measure, owing to a want of due cleanliness in the mother or nurse. To prevent them, and likewise remove them when they do occur, it will be necessary to wash the parts well with

cold water once or twice a day, to change the linen often, and keep the child perfectly clean and sweet. After the child is washed and dried, the parts affected may be sprinkled with a little fine chalk, mixed with an equal proportion of prepared calamine. Where the excoriation or galling is considerable, the parts, after having been washed with cold water, may be dabbed with a linen rag moistened in equal parts of rectified spirit and common water, with an addition of two or three drops of the solution of acetate of lead, and then be dressed with fine lint spread with spermaceti ointment.

As very bad consequences have however been known to result from hastily drying up discharges from behind the ears and other parts in children, some caution is requisite in using all such external applications.

STOPPAGE OF THE NOSE, OR SNUFFLES.

This is a trifling complaint very incident to young children, wherein the nostrils are plugged up with a quantity of mucous fluid, which at length acquires a gross consistence, and not only prevents their breathing freely, but impedes their sucking and swallowing.

It seldom requires any thing more than to cleanse the parts with tepid water, and then to smear the nostrils with a little lard or sweet oil, keeping the head pretty warm at the same time, and the bowels open with a little castor oil, or a few grains of magnesia and rhubarb.

OF THE YELLOW GUM.

This is a trifling degree of jaundice, with which some infants become affected a few days after their birth, and supposed to arise from a retention of the meconium, or slight obstruction in the biliary passages. The complaint is accompanied with languor, a yellow tinge of the skin, high coloured urine, and an unusual propensity to sleep.

In general, these symptoms are easily removed by freely opening the child's bowels by some mild medicine, when the mother's milk does not prove sufficiently purgative.

OF VOMITING.

A vomiting in children is now and then an original disease, or is dependant on some other; but in many instances it arises from too much food received into the stomach, either from sucking or their being fed.

When what has been taken is soon returned in an unaltered state, we may suspect that the vomiting is owing to over-feeding the child, and this will only require moderation in future. When

it is owing to food of an acrid nature, the diet ought to be changed, and aliment of a milder nature be substituted in its stead. The child's bowels may at the same time be opened by a few grains of magnesia and rhubarb.

Should the vomiting still continue notwithstanding the adoption of these means, the stomach may be cleansed either with a few grains of the powder of ipecacuanha, or a weak solution of tartarized antimony. One grain of the latter may be dissolved in two ounces of common water, and a tea-spoonful of the solution be given every quarter of an hour until some degree of vomiting is excited.

In obstinate vomitings, a table-spoonful of the saline medicine in the act of effervescence, with two drops of the tincture of opium, may be given to the child, and its stomach be rubbed externally with camphorated spirit and a solution of ammonia, in the proportion of three parts of the former to one of the latter. If these means likewise prove ineffectual, a small blister may be applied immediately over the region of the organ affected.

Should the vomiting be a symptom attendant on some other disease, its remedy must be adapted to the proper treatment of its cause. If it has arisen, for instance, from the sudden disappearance or repulsion of any eruption on the skin, the child ought to be immersed in a warm bath of a moderate temperature, and when taken out of it be well wiped and put into a warm bed, the perspiration being encouraged at the same time by giving it tepid diluting liquors to drink; or if it has been occasioned by the suppression of a discharge behind the ears or elsewhere, particularly if consequent upon drying applications, the return of the discharge should speedily be solicited.

OF A LOOSENESS, OR PURGING.

This complaint, as well as the former, very often arises in children from the introduction of unwholesome food into the stomach, as well as the sudden disappearance of some cutaneous eruption of a critical nature; and infants who have been recently deprived of the breast are sometimes greatly disordered in their bowels by frequent watery stools, attended with gripes and occasionally by convulsions. When this happens, restoring the child to the breast of its former nurse, or that of another, should not be neglected as the first necessary step to be taken.

Treatment.—In most cases, let the cause be what it will, it may be advisable to evacuate the offending matter, by giving a gentle emetic of a few grains of ipecacuanha, and afterwards to exhibit a mild purge of magnesia joined with rhubarb. This may be repeated every third or fourth morning, according to the strength of the child and other circumstances of the case. On the intermediate days, the disease is to be mitigated by a use of some absorbent medicine, such as the chalk mixture, (see the Class of Absorb-

ents, P. 5.) of which a pap-spoonful or two may be given three or four times a day. Should the purging not be considerably checked by this medicine, some other of an astringent nature must be substituted, as in the following forms. Take compound powder of cinnamon, three grains; prepared chalk, eight grains; powdered catechu, three grains; mix them well, and let this powder be given to the child twice or thrice in the course of twenty-four hours; or take of cinnamon water two ounces; compound powder of chalk, fifteen grains; tincture of kinko, one drachm. Well mix them, and let the dose be a pap-spoonful morning, noon, and night.

If much griping attends or precedes the stools, or these still continue to be frequent, a tea-spoonful of the syrup of poppies, or two or three drops of the tincture of opum, according to the age of the child, may be added to one dose of either of the above astringent medicines taken daily. A preference should be given to the dose administered in the evening.

THE LOCKED JAW OF INFANTS.

This disease is a very common one in our West India colonies, particularly among negro infants; but it is by no means confined to warm climates, being now and then met with in Great Britain and other Northern kingdoms.

Costiveness, a retention of the meconium, and exposure to cold or currents of air, have been usually assigned as the exciting causes of the complaint; but I think that in most cases it is owing to not paying a proper attention to the wound after the falling off of the navel string, or from irritation in the part during the sloughing off of this.

Fatal consequences usually attend an attack of the disease. In most cases the rigidity and contraction are confined wholly to the jaw, but occasionally they extend to other muscles of the face, and there is then a squinting of the eyes, together with startings of the tendons.

Treatment.—Under attacks of this spasmodic affection immediate recourse should be had to a warm bath, and the other means specified under the head of Tetanus or General Cramp.

To guard against an attack of the complaint, the several causes likely to produce it should be carefully attended to. On the birth of the infant, a sharp instrument should be employed to divide the navel string, after which the remaining portion of it may be wrapped up in a little scorched linen. This portion of it should be allowed to come away spontaneously, and not be separated by force; and if any ulceration remains after the separation of the diseased part from the sound, it ought to be dressed daily with a little fine lint spread with calamine cerate, taking care at the same time to avoid any improper pressure upon the wound by bandages.

To obviate costiveness and carry off the meconium, both of which have been assigned as probable causes of the locked jaw in

infants, it will be advisable, where the mother's milk does not prove sufficiently aperient, to give the child a little magnesia and rhubarb, or a tea-spoonful of castor oil a day or two after its birth.

The disease being supposed sometimes to arise from an irritable condition of the wounded parts in the division or separation of the navel string, it might possibly be prevented by bathing them with a strong decoction of poppy heads, or the vinous solution of opium.

INFLAMED OR SORE EYES OF INFANTS.

Some children soon after birth become affected with an inflammation of the eyelids and eyes, accompanied by a discharge of thick purulent matter, somewhat similar to what occurs in the Egyptian ophthalmia, noticed in the preceding part of this work, page 156.

This species of inflammation has most commonly been met with in the children of those women who have been afflicted with an acrimonious discharge from the passage to the womb at the time of delivery, in consequence of their labouring under the whites; but no doubt it sometimes arises from other causes, such as an exposure to cold, or a peculiar constitution of the atmosphere.

At the commencement, an uneasiness is felt in the balls of the eyes, the eyelids are red and somewhat swelled, and there is an intolerance of light. As the inflammation proceeds, a secretion and discharge of purulent matter takes place, which is of so acrid a nature as to irritate the eyes exceedingly, and to excoriate the neighbouring parts on which it happens to fall. The infant is hot and feverish, cannot remain long in one posture or situation, and gets no sleep by night or day. If a sight of the balls of the eyes can be obtained, they are found bathed with purulent matter. In very severe cases, a rupture of the coats of the eye takes place, or a number of fleshy granulations arise on its internal surface, and destroy the sight.

Treatment.—On the very first appearance of the inflammation, one or two leeches ought to be applied to the particular eyelid, or to both if they are affected, and a blister behind each ear, or to the nape of the neck. The child's bowels are then to be emptied by a dose of the submuriate of mercury joined with rhubarb, in the proportion of two grains of the former to four of the latter, and this medicine should be repeated every second or third day. Linen cloths wetted in a solution of the sulphate of zinc in water (say three grains of the former to four ounces of the latter) should be kept constantly over the eyelids, opening them occasionally, and suffering a little of the lotion to drop in between them. At night the eyelids may be smeared with a little of the cerate of superacetate of lead, or with spermaceti ointment.

This course must be persevered in until the disease is subdued; but should the inflammatory action in the eyes or eyelids remain

obstinate, the application of the leeches, as also of the blisters, ought to be repeated.

OF ERUPTIONS.

Infants are subject to numberless kinds of rash from the first month until the completion of teething, and it has invariably been observed that their bowels are in a better state when affected by such eruptive complaints than when they are without them. It therefore appears that nurses and parents should be very cautious how they interrupt or attempt to dry them up; for they often free the bodies of infants from injurious humours, which, if retained or repelled, might produce serious disorders.

It sometimes happens that an eruption now and then comes out on different parts of the body of a child at the breast, owing to some bad quality in the milk of the woman who suckles it. The first and material point to be attended to in all such cases, is to change the nurse, and then to keep the bowels open by a little magnesia, which will have the double effect of acting likewise as an absorbent. The strictest attention ought to be paid at the same time to cleanliness.

There are, however, many eruptive complaints to which children are liable, and which require more particular attention. An eruption, somewhat resembling the itch, is not unfrequently to be met with among children at the breast, as likewise in those who have cut their first teeth. It usually begins about the arms and thighs, but soon spreads to other parts, and not unfrequently extends from the head to the feet. It appears as small as the points of pins in some places; with watery heads, and in others as large as peas, and occasionally in foul blotches, which, after breaking, form ugly scabs and sores. These die away, and are succeeded by similar ones in other parts, leaving the skin of a dirty hue.

The best treatment in eruptions of this nature, is to wash the parts affected with about one drachm and a half of the solution of potash, diluted with one pint of water, dressing them afterwards with sulphur ointment. If any medicine is given internally, a few grains of sublimed sulphur, with an equal quantity of magnesia (say five grains of each for a child of five or six months old) may be given every other morning.

A slight species of nettle rash is another eruptive complaint to which young children are liable. When the body is much covered with eruptions, and they remain long out, the bowels must be kept gently open, and care be taken that there shall be no exposure to cold so as to repel them. If they should strike in suddenly, the return of the eruption ought to be solicited by having recourse to a warm bath, and then giving the child some diaphoretic medicine, such as a pap-spoonful of the camphor mixture with three or four drops of the solution of tartarized antimony.

During the process of teething, other rashes of a larger size,

sometimes attended with febrile symptoms, are often to be observed. These only require a proper attention to be paid to the state of the bowels, unless the fever runs high; in which case the means recommended under the head of Teething must be adopted in addition.

A rash somewhat resembling the measles, is apt to come out on the bodies of children during an early period of teething, which continues florid for three or four days, but does not dry off in the same manner with that disease. It is attended with no fever, but sometimes nausea and vomiting in a slight degree precede it. A few doses of some testaceous powder, with two or three grains of the nitrate of potash (say three grains of the latter with six or eight of prepared chalk) may be given morning and evening to a child of six or eight months, until the eruption disappears; when it will be advisable to administer some gentle laxative, such as magnesia with a few grains of rhubarb, repeating it once or twice.

The following eruptive complaints claim a more particular attention.

OF THE RED GUM.

This complaint consists in an eruption of small pimples on the skin, which are evident to the touch, generally red, but sometimes of a yellow hue. It appears for the most part on the face and neck in clusters or large patches; but it sometimes extends to the hands and legs, and occasionally it shews itself in small pimples, which are filled with a limpid or purulent fluid.

It is considered by most medical practitioners to be salutary, and seems often to relieve infants of a difficulty of breathing and complaints of the bowels. It would therefore be improper to employ any external application to repel it. Its repulsion suddenly, is to be prevented by avoiding any exposure to cold air, and giving the child a little magnesia and rhubarb, so as to keep its bowels properly open. Should the eruption suddenly disappear, and the child be evidently indisposed in consequence thereof, it will be advisable to put it into a warm bath, and afterwards give it two teaspoonsful every second or third hour, of a weak solution of tartarized antimony in water, in the proportion of one grain of the former to three ounces of the latter. This will keep up a determination to the skin, and reproduce the eruption.

OF THE THRUSH.

This disease is very common among infants, particularly those brought up by the hand, and appears in white specks on the corner of the lips, the tongue, and back part of the palate, spreading gradually over the inside of the mouth, and extending at length throughout the intestinal tube, if neglected.

Acidities in the stomach and bowels, or some acrimonious mat-

ter therein from bad milk, have usually been assigned as the common causes of the thrush in infants.

The disease, when an original one, is never attended with febrile symptoms at its commencement, although the infant's mouth is sometimes so heated as to excoriate the nurse's nipples, and so tender as to occasion it to suck with caution and reluctance; but when it has arisen after some bowel complaint or other disorder, it is then accompanied with fever, and perhaps a severe purging. The accompanying fever is usually of the low kind.

When the thrush is of long standing, and has extended throughout the alimentary tube, it will prove of difficult cure, and frequently will terminate fatally, but when recent or confined to the mouth wholly, it may in general be easily subdued.

The treatment of the disease must proceed on the following plan. To make a change of the child's diet, and direct a proper combination of vegetable and animal food, such as veal broth or beef tea thickened with arrow root or fine white flour, where the nurse's milk or the food before used, seems to have given rise to the complaint. It will at the same time be proper to obviate a costive state of the bowels or acidities therein, by occasional doses of magnesia joined with a few grains of rhubarb, or one or two of the submuriate of mercury. On the intermediate days a medicine consisting of five grains of the compound powder of chalk, and three of the compound powder of contrajerva, may be taken twice a day.

To keep the mouth comfortable and clean, the parts affected with specks may be touched three or four times a day by means of a large camel's hair pencil with some detergent application, such as either of the following—Dissolve three drachms of the sub-borate of soda, and two ounces of honey of roses in four ounces of hot water, or take one ounce of the honey of roses, fifteen drops of muriatic acid, warm water, two ounces, and tincture of myrrh, half an ounce. Let them be well mixed.

When the thrush appears of a malignant nature, and from the dark appearance of the specks, threatens to terminate in gangrenous ulceration, a decoction of the bark with a drop or two of muriatic acid conjoined to each dose, ought to be given to the child four or five times a day by the mouth. To render its efficacy greater and more certain, a clyster of the plain or simple decoction, in the quantity of three or four ounces with an addition of half a drachm of the powder of the same, and six or eight drops of the tincture of opium, should there be a purging, may be injected morning and night.

In the advanced stage of the thrush, when the system is much reduced, and the stools are frequent, the child's strength must be supported by nourishing jellies, arrow root, &c. and Port wine properly diluted, in addition to the means before pointed out.

To sum up the treatment necessary in the thrush, it is only to say thas it will be advisable to pay a strict attention to the diet of

the infant; to take care that the food be not given too hot or stale; to correct acidity in the stomach and bowels by magnesia or prepared chalk, and to heal the ulcerations by the topical application of some detergent application. If the child be very restless or griped, a tea-spoonful of the syrup of poppies, or three or four drops of the tincture of opium, should be given at night in any convenient vehicle, such as a little barley water or thin gruel.

If a severe purging attends, astringent medicines, (See this Class, P. 3, 5, or 7.) in doses proportioned to the age of the child, must be administered two or three times a day.

OF A PROTRUSION OF THE FUNDAMENT.

This is a distressing ailment, frequently occurring to children of a delicate and weakly frame of body, particularly after great laxity of the bowels.

Regimen and Treatment.—Besides paying attention to the general health of the child and strengthening its body by nutritive food, a strict attention to cleanliness, and the employment of cold bathing, if not contra-indicated by the presence of any other disease, we may advise the protruded parts to be washed with a weak solution of alum in water, and then by a gentle and gradual compression, to be reduced. The most difficult and tedious part of this process consists usually in replacing the last folds of the inner membrane of the gut, which will still continue to return as soon as the finger is withdrawn, and in this respect proves very troublesome. In all such cases, the following plan may be adopted. Introduce on the end of the finger a cone formed of stiff paper, oiled externally and wetted at the point. When the finger is withdrawn from within, it will generally come away without being followed by the gut; but if this plan does not answer, a common candle, or what is still better as it does not retain the outer orifice dilated, is a small elastic gum pessary, which may be introduced and kept in for a short time until the temporary tumefaction of the inner membrane has subsided, the patient at the same time remaining in an horizontal posture. When up, the application of a bandage in the form of a T may be worn as a support to the part.

OF THE SCABBED HEAD.

This disease appears under the form of chronic inflammation of the skin of the head, which pours out a secretion of matter of such an infectious nature as to be capable of producing the same complaint in another subject, if applied to the scalp. The discharge is often so acrimonious as to cause swellings of the lymphatic glands of the neck. The whole of the hairy scalp is subject to it, and is beset with a scabby eruption; but on a close inspection, it will appear most virulent at the roots of the hair.

The scabbed or scald head is found chiefly to affect children, particularly those of the poor, and in many instances may therefore be ascribed to a want of cleanliness, a proper supply of wholesome nutritive food, and bad nursing. These, at any rate, will aggravate the complaint. In many cases it is produced by infectious matter conveyed from a child labouring under it to another; by employing the same comb or towel; by putting on its hat or cap, or by sleeping in the same bed.

When the disease is accompanied by a scrofulous disposition, or has been of long standing, it very frequently proves obstinate and difficult of cure.

Treatment.—The first step to be adopted for subduing the complaint, is to cut the hair very short in the places affected, to keep every part of the head very clean, by well washing it with soap and water, and then combing it and brushing away the scabs. Should these means not be found sufficient, the head must be shaved once a week, be well washed daily with warm water and soap, and then be dressed with either of the following ointments, smeared over the scalp, or spread upon a soft linen rag, covering the whole with an oiled silk cap or bladder. Take tar ointment, six ounces, ointment of the nitrate of mercury, two ounces—Mix them well, or take liquid tar, five ounces, mutton suet, three ounces, and sublimed sulphur, ounce one and a half. Melt them over a gentle fire.

At the same time that these steps are daily adopted, the child must be confined to a regular cooling diet, and its body be kept gently open. Its general health ought likewise to be attended to, and particularly the digestive organs. If the stomach be disordered, a gentle emetic of the powder of ipecacuanha may be given, the bowels be cleared by some mild purgative, and then an ounce of an infusion of cascarilla, with four or five grains of the carbonate of soda, be taken twice a day.

If the above means do not seem to produce a proper effect on the disease, the head may be washed with a strong infusion of tobacco leaves in warm water, and then be dressed with the following—Take common lard, two ounces, ointment of the nitrate of mercury, one ounce, and white precipitate of mercury, one scruple. Mix them well, or try the common mild mercurial ointment.

Should the glands in the neck swell much on the disappearance of the eruption on the scalp, an issue may be made near the part, and this be kept open until the swelling subsides and the constitution is amended.

OF THE RING WORM.

This is a very obstinate and troublesome disease which is confined to the skin, chiefly occupying the scalp of the head, but sometimes appearing in the neck and other parts of the body. It

is very prevalent in large schools where there are a number of children of either sex associated together, and when it appears on any one of them it is very apt to be communicated to others, particularly by an indiscriminate use of the same comb and hair brush, their putting on each other's hats or night-caps, or their sleeping together, like what occurs in the disease of the scabbed head.

When the complaint occupies the scalp, there is to be observed a small red circle in some part, and this gradually becomes larger, and has a scurfy appearance, from which the hair is detached by the slightest touch. In process of time, other circles of a similar appearance are to be seen, and these keep gradually increasing both in size and number until by running into each other, they at last occupy a large portion of the scalp. If the disease is not early attended to the glands of the neck are apt to become enlarged and swelled, and ulcerations sometimes ensue.

In other parts of the body, the disease shews itself in small red pimples somewhat of a circular form, which contain a thin acrid fluid. The size of the circle formed by these pimples does not at first usually exceed that of a sixpence; but in the course of time it will become as large as the palm of the hand, and the circular eruptions will run into each other. If the body becomes heated by exercise, intolerable itching is excited in the diseased parts, and by scratching them, the acrid fluid which is discharged from the pimples falls on the neighbouring parts and affects them.

Treatment.—It is seldom that the internal use of medicine will be necessary, topical applications being only requisite in general.

When the scalp of the head is affected, it will be proper to shave the parts occupied by the eruptive circles every five or six days; to wash them well morning and night with soap and water, then dab them with a linen rag wetted in either of the following lotions, afterwards smearing them well with the ointment of the nitrate of mercury. Dissolve one drachm and a half of the sulphate of zinc, and one scruple of the superacetate of lead in seven ounces of common water; or dissolve ten grains of the sulphate of copper in five ounces of water. Either of these lotions may be used, substituting one for the other if not found to answer the desired purpose. Should they both fail, a wash composed of the oxymuriate of mercury may be tried; for which purpose, dissolve eight grains of this and one scruple of the muriate of ammonia in a glass mortar with twelve ounces of water.

In those inveterate cases where the glands of the neck swell, it may be advisable to give some alterative medicine inwardly, (see this Class, P. 1, 2 or 3,) adding to the effect thereof by administering at the same time some kind of diet drink, such as the compound decoction of sarsaparilla, and an occasional gentle purgative.

Many other external remedies besides those mentioned, particularly ink, mushroom catsup, &c. have at times been employed in

the cure of the ring worm, and may be tried if others are not at hand. Sea bathing is also occasionally used, but in my opinion its virtues are of too trifling a nature to be relied on solely, although it may prove a useful auxiliary.

OF DENTITION, OR TEETHING.

This process commences in the majority of children between the fifth and eighth month, and continues to the sixteenth at least, but sometimes much longer. No fixed period can however be pointed out for children to commence cutting their teeth, as some cut their first tooth at three or four months old, and others again shew no appearance of any teeth before the eighth or ninth month.

The two fore teeth of the under jaw are those which usually appear first, and some time afterwards, two are to be observed in the upper jaw, exactly opposite to the former. In process of time, the four double teeth, commonly denominated the grinders, succeed the fronth teeth, and at the expiration of some weeks, the canine or dog teeth appear: and lastly (of the first set of teeth) the two corresponding ones in the upper jaw, distinguished under the appellation of the eye-teeth.

In children who are healthy, the teeth are cut soon and easily; but in weak and unhealthy infants, the process of dentition is slow, and does not commence at the accustomed period: moreover the teeth are cut irregularly, both by their appearing first in the upper jaw, and at some distance from each other, instead of being close to each other. About the sixth or seventh year, the first set of teeth in children are shed and replaced by a fresh one, and about the twentieth year or later, appear the inner grinders, or teeth of wisdom, being so named on account of their not appearing until the person is supposed to arrive at the year of discretion, one coming through the gums in the corner of each jaw.

The symptoms which precede and accompany dentition are various in different children, but in general they are as follows. The child begins to drivel much, the gums swell, spread, and become hot: there is often a circumscribed redness in the cheeks, eruptions on the skin, a looseness accompanied by gripings and greenish stools, startings during sleep, restlessness, febrile heat, some difficulty of breathing, sudden shrieks, the fingers of the child often thrust into its mouth, and this beset with the thrush. Where the irritation of the gums is considerable, convulsions sometimes ensue.

It has been found that children who drivel much, or whose bowels are loose, cut their teeth with the greatest safety and ease; and that those who are inclined to be lean go through the process of dentition easier than those who are fat and robust. The extremes of high health and debility are both unfavourable to children who are cutting their teeth; the former deing exposed to acute fever or convulsions, the other to atrophy and rickets.

Treatment.—Pure air, exercise, strict cleanliness, food easily digested in the stomach, and taken in small quantities but frequently, keeping the bowels sufficiently open, together with paying a due attention to every circumstance likely to promote the general health of the child, will greatly contribute to its safely passing through the painful and dangerous process of teething.

As the hazard attendant on dentition is considerably lessened, nay, often wholly prevented, by a looseness occurring spontaneously, it will be prudent to encourage any laxity of the bowels that may take place naturally, particularly in children of a full habit, unless it runs to excess; but where none takes place spontaneously, or the child is apt to be confined in its body, two or more stools daily ought to be procured by means of some gentle laxative, such as two grains of the submuriate of mercury, joined with a little magnesia or a few grains of rhubarb. These may be assisted occasionally by aperient clysters.

If the child is feverish and the gums much inflamed, it may be necessary to scarify them with the edge of a lancet, after which a few leeches may be applied behind the ears. If these do not relieve the symptoms, a tepid bath may be used once or twice a day, and the saline medicine, containing a small quantity of the tartarized antimony, (see the Class of Diaphoretics, P. 5 or 6,) be given in doses of a pap-spoonful every four or six hours, so as to produce a gentle perspiration.

For the purpose of allaying irritation during painful and difficult dentition, nurses are very apt to resort to one or other of the preparations of opium, in order that their own rest may not be disturbed throughout the night, and this often proves injurious to the child. The safest anodyne which can, however, be administered to children in cases of urgency, and which really require the aid of some tranquillizing medicine, is the syrup of poppies, about a tea-spoonful of which may be given as a dose.

During the process of teething children are sometimes incommoded by an excoriation of the gums, but these will in general readily yield to touching the parts affected with a little honey of borax, and keeping the bowels properly open. The same treatment must be adopted where the lips and mouth are beset with the thrush.

If acidity prevails in the stomach, accompanied by flatulency and griping pains in the bowels, during dentition, a few doses of magnesia in a little peppermint, carraway, or dill water, will be the best remedies.

OF CONVULSIVE FITS.

These spasmodic affections frequently attack children during the process of teething; but they may also be occasioned by worms, by acrid matter pent up in the stomach and bowels, by the accession

of some constitutional disease, such as the small pox, scarlet fever, &c. or the sudden repulsion of any eruptive complaint or rash.

The degree of danger attendant on convulsions in children is always to be estimated by the distance of the paroxysms, as well as the forcible contractions of the muscles during the fit. The shorter the intervals, although the fit be neither long or violent, the greater will be the hazard.

Treatment.—It is of the utmost importance in the convulsions of young children to discover the cause which has given rise to them. When they appear to be occasioned by indigestion or improper food, a gentle emetic of a few grains of ipecacuanha, or a weak solution of tartarized antimony in water (say one grain of the former in three ounces of the latter, of which a desert-spoonful repeated every quarter of an hour) may be given to dislodge the offending cause. If supposed to arise from irritating matter of any kind in the intestines, it should be removed by some gentle aperient medicine, such as a couple of grains of the submuriate of mercury, conjoined with five or six of rhubarb or jalap, assisted, if necessary, by a laxative clyster. If from flatulency and gripings, some carminative medicine as advised in P. 4 and 5 of that Class, may be given in the dose of a table-spoonful every four or six hours; but if occasioned by teething, then scarifications ought to be made with the edge of a lancet immediately over the part where the tooth appears to be seated, and the operation may be repeated from day to day until the convulsive fits cease and the tooth appears through the gum.

When, from the symptoms which present themselves, there is reason to suspect that the convulsions have been occasioned by worms, the remedies recommended under that head should be employed.

If the sudden disappearance of a rash, or the drying up of any discharge behind the ears or elsewhere, has given rise to the fits, its re-appearance ought to be promoted by putting the child into a warm bath, then giving it some cordial diaphoretic medicine (see the Class of Diaphoretics, P. 6 or 7), in the dose of a table-spoonful every four hours, and, if necessary, apply a blister to the part where the discharge originally proceeded from.

With regard to opiates in the convulsions of infants, I shall only observe, that although sometimes serviceable, yet if injudiciously administered, they are apt to prove hurtful. They may, however, be regarded as safe when the convulsions continue after the exciting cause has been removed, or where they are so violent as to become an obstacle to the application of appropriate remedies. In such cases, we may safely venture on giving a tea-spoonful or two of the syrup of poppies, or four or five drops of the tincture of opium in a pap-spoonful of pimento or carraway water.

During convulsive fits, the body of the child ought to be placed in a horizontal position, and its face be frequently sprinkled with cold water. Volatile salts or spirits may be applied from time to time to its nose.

Convulsive fits sometimes precede the eruption of the small pox, in which case the best way to recover the child is to expose it freely to cool air.

What are termed inward fits are noticed by some medical writers on the diseases of infants, who are said to be more or less liable to them during the first month or two. The symptoms are an appearance of being asleep, with the eyelids a little open, and frequently twinkling, and the eyes turned upwards. The breathing is somewhat interrupted, and appears now and then to stop a little, with a fluttering at the heart and intermission of the pulse: a pale circle encompasses the eyes and mouth, but this is sometimes livid. At length the child becomes irritable, and starts at the least noise; it will then sigh and discharge wind, which affords a temporary relief. Before the expulsion of the wind, it sometimes seems very restless and struggles much, it then either vomits or cries. These fits usually go off spontaneously as the child advances in age; or by a mismanagement in its diet, they grow worse, and are succeeded by fever, sour and green stools, thrush, or general convulsions.

The complaint is often occasioned by overloading the stomach with food, which not being properly digested, becomes acid, and excites irritation in the intestinal canal. The mechanical distention of the stomach at the same time co-operates in producing spasms.

The treatment must be regulated on the plan of avoiding the exciting cause, and emptying the stomach by a gentle emetic, such as a solution of the tartarized antimony, (see the Class of Emetics, P. 5,) and then evacuating the contents of the bowels by some laxative medicine, as two grains of the submuriate of mercury, with six or eight of rhubarb, and about five or six of the compound powder of cinnamon. Should the disease continue after the adoption of these steps, from five to ten drops of the solution of the subcarbonate of potash may be given every hour in a pap-spoonful of dill or peppermint water, until the child appears to be much relieved.

OF THE WEANING BRASH.

This disorder appears most frequently in children who are weaned too soon, or have been brought up without the breast by improper food.

It shews itself at first with frequent griping and purging, the stools being usually of a green colour, and not unfrequently there is a vomiting of bilious matter. As the disease advances in its progress, the evacuations from the intestines acquire an ash colour, and a shining appearance. The child loses its strength and flesh, becomes emaciated, and not unfrequently is carried off by convulsions. Its belly is usually tumid and swelled; and upon pressing it with the hand, the glands of the mesentery or caul will be found enlarged and hardened.

For the removal of this disease, the first point to be attended to on its being discovered, is an attention to diet, and if possible a healthy nurse with a good breast of milk should be procured for the child, if it will still suck. When it will not, food of a highly nutritious nature must be substituted, such as arrow root, crumb of bread, rice, &c., boiled up in good broths made from mutton, veal, or beef. If it has got teeth to chew with, a moderate quantity of either of these meats, not overdone, but containing their natural juices, may likewise be given daily, previously cut very fine; its drink may be good table beer, mild ale, or a little wine properly diluted with water.

Flannel should be worn next to the skin, and the feet be enveloped in worsted stockings. In short, every precaution should be taken against the irregular or improper application of cold. It may be of service to put the child into a warm bath twice or thrice a week, of the temperature of from 90 to 100 of Fahrenheit. Pure air, regular exercise, and moderate frictions with the hand over every part of the body, but more particularly the stomach and belly, may be regarded as useful auxiliary remedies.

The best medicines will be those of the absorbent class, joined with such as are of a strengthening and tonic nature, viz. a few grains of magnesia combined with powdered gentian or the Peruvian bark, &c., occasionally interposing some gentle laxative medicine, for instance, one grain of the submuriate of mercury, with four or five of rhubarb for a child of a year old, and so in proportion.

Where the disease manifests itself in children of three or four years of age, and runs into atrophy, the means advised under this particular head must be adopted.

OF THE CROUP.

This disease consists of a violent inflammation of the mucous membrane lining the windpipe or trachea, which throws out a kind of exudation or lymph that afterwards becomes inspissated, and thereby so impedes the passage of air into the lungs as to interfere very greatly with respiration. It is characterized by a peculiar sonorous inspiration, compared by some to the crowing of a young cock, a similar stridulous sound in speaking and coughing, great difficulty of breathing, thirst, and other febrile symptoms.

It is principally met with among children, and has therefore been inserted among the diseases incidental chiefly to them, and the little patient is liable to a return of the disease on the slightest exposure to cold. It is most common on or near the sea coast, and in low marshy countries.

Symptoms.—The croup usually creeps on imperceptibly, beginning with a hoarseness and wheezing, and also an obtuse pain about the upper part of the windpipe, a short dry cough, and sometimes a rattling in the throat when asleep. There is a considerable

difficulty of breathing, which at length increases much, the face is flushed, and the veins of the neck distended with blood; the voice in speaking and coughing acquires a shrill and peculiar sound, similar to the crowing of a young cock, or that of a piston forced up a dry pump. At the commencement of the disease, the cough is not moist, but very soon however a viscid tenacious matter is brought up; with portions of film or membrane of a whitish colour; and the efforts made to expectorate these are often so distressing as seemingly to endanger suffocation.

With these symptoms there is universal restlessness, an uneasy sense of heat over the whole body, great thirst and a quick pulse. If the disease is not arrested in its first stage, respiration becomes more stridulous and difficult, being then accompanied by some degree of spasmodic affection to all appearance, and being repeated with greater exertions and at longer periods, it at last ceases entirely, the patient expiring from suffocation.

Causes.—The croup may be induced by any of the usual causes of inflammation, but an exposure to cold in various ways is the one which most usually gives rise to it; hence it prevails most in wet and cold seasons. It frequently attacks children in the night, after having been exposed to damp air or cold easterly winds through the day. The disease sometimes prevails epidemically, but has not usually been thought contagious.

We should ever consider an attack of the croup to be attended with danger, and therefore never delay prompt and active measures at its commencement. Great difficulty of breathing, no expectoration, vast anxiety, violent fever, and the sound of the voice becoming more shrill, are to be looked upon as very unfavourable symptoms: on the contrary, an early and copious expectoration, the breathing not much impeded, the voice little altered from what is natural, and the febrile symptoms being moderate, are to be regarded in a favourable light.

The peculiarity of speaking, breathing, and coughing before described are sufficient to distinguish the croup from all other diseases. It has however a close resemblance to a species of quinsey which has been noticed under that head, and which is seated principally in the mucous membrane that lines the cartilaginous pouch, situated in the anterior part of the throat, and behind the tongue, known to professional men under the name of larynx. See Page 159.

Treatment and Regimen.—Before I proceed to these subjects, I beg leave to observe that it will be advisable to pay the most scrupulous attention to the state of the organs of respiration, whenever the least change is perceived in the voice of children, although the change may appear to be the result of an affection different from the croup. From the highly dangerous nature of this disease, and the situation of the parts occupied by the inflammation, it will be necessary to resort to immediate and very active means. On the first appearance or attack, blood should be drawn

from the jugular vein or arm, in a quantity proportioned to the age and strength of the child, after which a large blister should quickly be applied across the throat from ear to ear, and the part be kept discharging copiously, by dressing it with the fly ointment when removed. General bleeding and blistering having been adopted, a brisk purgative, composed of three or four grains of the submuriate of mercury (calomel) with eight or ten grains of jalap, should then be given; and if several stools are not promptly obtained, a laxative clyster (See the Class of Laxatives, P. 16) may be administered to expedite and assist the purge.

During the action of the purgative, twelve or more leeches (according to the difficulty of the breathing) should be applied immediately under the lower edge of the blister, and when they drop off, the flow of blood must be encouraged by dabbing the wounds from time to time with a linen rag dipped in warm water.

By these several means we probably may be able to arrest the progress of the inflammation, and relieve the difficulty of breathing; but should our object not be obtained, it will be advisable to draw blood again from the arm or jugular vein, and after a short time to apply more leeches as before.

In the course of the disease there is always an exudation and lodgement of lymph in the windpipe, which greatly obstructs the the patient's respiration. To dislodge and bring off this, if possible, it will be advisable to excite gentle vomiting once or twice a day. See the Class of Emetics, P. 3 or 5. To assist in promoting an expectoration, the vapour arising from warm water and vinegar may be inhaled frequently throughout the day and night. A warm bath, heated to between 90 and 100 degrees of Fahrenheit's thermometer, may be employed towards the close of the evening.

Where the febrile heat is considerable, and the skin dry, a grain of antimonial powder combined with the like quantity of calomel, and made into a pill with a little confection of roses, may be taken every four hours, washing it down with two table-spoonsful of the saline mixture. See the Class of Antiphlogistics, P. 5.

It has been recommended by some physicians to administer the submuriate of mercury in the croup, so as to excite salivation; and with this intention it may be given in doses of three grains, with about double that quantity of white sugar every four or six hours, mixed up in a little jelly or honey. The remedy is likely, I think, to produce a good effect after copious bleeding, purging, and vomiting; but no reliance should be placed in it until after these several means have been adopted.

Two species of croup are noticed by medical writers, viz. the inflammatory and the spasmodic; but although spasmodic appearances may manifest themselves towards the close of the disease, still it is an indisputable fact that croup, in its early stages, depends upon active inflammation in the mucous membrane of the windpipe; and therefore to treat it with any chance of success, we

must resort to copious bleedings, both general and topical, blistering, purging, and gentle vomiting, &c. instead of trusting to the administration of medicines for the purpose of allaying spasm.

Throughout every stage of the croup, the patient should be restricted to a vegetable diet, and this should be given in a liquid form, that it may not excite irritation in being swallowed.

If we are so fortunate as to preserve life by subduing the disease and removing it, great caution will be required to prevent its returning; and therefore all exposures to cold or damp, easterly winds, currents of air, or wet feet, are to be cautiously shunned, as well as every other cause that might be likely to excite a fresh attack.

Where the disorder remains unsubdued, and the patient is threatened with suffocation in consequence of the air not having due access to the lungs, the only chance that remains for preserving life is to have the necessary operation of making an opening into the windpipe immediately performed by some skilful surgeon. This will afford at least a temporary relief, if not a permanent one.

OF THE RICKETS.

The disease is marked by an unusual size of the head, swelling of the joints, flattened ribs, distortion of the cylindrical bones, incurvation of the spine, protuberance of the belly, general emaciation of the flesh, and debility.

It is a disorder peculiar to infancy, seldom appearing before the ninth or tenth month, and not often after the third year, but usually during the time that intervenes between these periods. It prevails most in towns, particularly among the children of the poor, where the inhabitants follow sedentary employments, such as in various manufactories, and neglect to take proper exercise themselves, or give it to their offspring. The disease is almost solely confined to cold climates in which the atmosphere is moist and damp, being very rarely met with in warm ones. In some families it prevails as an hereditary disease, although parents that have been affected with it not unfrequently have healthy and robust children.

Symptoms.—The rickets are preceded by a softness and flabbiness of the flesh, a countenance that appears full and bloated, a diminution of strength, loss of accustomed cheerfulness, and a disinclination for exercise, motion, or any amusement. At length, a flaccidity or enlargement of the belly, head, and joints of the child takes place: the wrists and ancles are the parts which first manifest the change, putting on the appearance of there being excrescences on the bones, then follows an enlargement of the back and breast bones, and indeed all the bones become large, soft, and spungy, and are too weak to support the weight of the body. The childs walks with increased difficulty, and at length entirely loses

the use of its feet, the bones of the legs becoming distorted and crooked.

As the disease advances, the sides of the chest become flattened, the breast bone elevated, often in a point, and the ends of the ribs knotty; the teeth usually come forward at a late period, and soon turn black and decay, or they become lose and fall out. The appetite seldoms fails, but digestion is evidently bad, being frequently attended with flatulency and a vomiting of crude acid matter. The stools are generally frequent and loose, and the belly appears uncommonly tumid and full. With regard to the mental faculties, ricketty children are usually more sensible and cunning than is common to others of the same age who enjoy health; but in a few cases, stupidity or idiotism comes on. In general the pulse is quick and febrile, and not uncommonly symptoms of a consumptive kind become manifest, and the child sinks under atrophy.

Causes.—Children whose food is thin and watery, from which they do not receive due nourishment; who from bad nursing are exposed to moist air without sufficient clothing, or are allowed to remain long wet and dirty; who are lodged in apartments crowded with many beds and inhabited by too great a number of persons, and are thereby deprived of pure fresh air; as also those who have sprung from parents who have been afflicted with a venereal taint of an inveterate nature in the former part of their lives, and this not perfectly subdued, are very frequently the subjects of rickets.

In some instances an hereditary predisposition is entailed on the child, so as to give rise to the disorder; and occasionally it proceeds from the constitution being much weakened or relaxed by previous diseases, as the small pox, measles, teething, whooping cough, &c.; but the most frequent causes are a want of attention to clothing, both as it respects cleanliness as well as warmth, living in dirty, ill ventilated and crowded apartments, food of a vapid, poor, and watery nature, a neglect of proper exercise, and a want of free, open, and pure air.

The rickets seldom prove fatal unless fever or atrophy supervenes; but after the fifth or seventh year, the child usually gains strength, and the bones of the legs, though they have been very crooked, acquire greater straightness as it grows up, while at the same time the distortion or curvature of the back bone frequently increases.

Treatment and Regimen.—This disease being always accompanied with evident signs of relaxation and universal weakness, our attention should be directed to the invigoration of the system, by bracing the solids and assisting digestion, which ends are to be promoted by giving the child wholesome nutritious food often, but in moderate quantities at a time, and suited to its age, as good bread or biscuit with boiled milk, plain animal food of a light nature, shell fish, &c. The drink may be a little Port wine properly diluted, and where this cannot be afforded, a wine glass of mild

ale or porter may be substituted. If the child is too young to eat flesh meats, it ought to be fed with preparations of rice, millet, arrow root, mixed with fresh milk, as also with good beef or mutton broths occasionally. In addition to a nutritive diet, the child should breathe a free, open and dry air, have good nursing and exercise in an horizontal posture by jumping it about, swinging it, and rubbing every part of its body with the hand or soft flannel, and by dipping it in cold water every other morning, if the season of the year will admit of the remedy. After trying cold bathing, if it is found to excite a glowing warmth, it may be continued with infinite advantage; but should the child shiver much on first using it, it ought to be placed between blankets, until it recovers its proper warmth. The next time the bath is used, it should be made a little tepid, proceeding gradually to the use of the cold one again, until the child can bear it with ease.

Previous to a use of tonic medicines, it may be advisable to empty the stomach of its crude contents, by giving a gentle emetic of a few grains of ipecacuanha powder in the evening, and on the succeeding morning some purgative. None will be more appropriate than a couple of grains of the submuriate of mercury (calomel) with a small quantity of rhubarb, proportionable to the age of the child. These steps being adopted, medicines of a strengthening nature may then be administered with great advantage. The Peruvian bark is to be given combined with stomachic bitters, (See the Class of Tonics, P. 8 or 9,) or with preparations of iron and myrrh (See P. 20, 21, or 26,) in proper doses. Where the child cannot be prevailed upon to take the powder of bark, a decoction or infusion may be substituted, in the dose of two tablespoonsful, with an addition of five or six drops of diluted sulphuric acid, or about ten or fifteen of the wine of iron.

If acidity in the stomach prevails, a little magnesia may be given occasionally to correct it; or if the bowels are torpid and inactive, a few grains of rhubarb may be conjoined therewith. Laxative medicines will indeed be occasionally necessary if the belly is hard, knotty, and enlarged. In such cases, frictions with the hand, interposing some discutient liniment, will also be advisable; and for this purpose mix well together two ounces of camphorated spirit, one ounce of soap liniment, and half an ounce of volatile aromatic spirit.

In cases of difficult teething accompanying the rickets, the means which have been pointed out under the head of the first of these must be resorted to; or if worms are suspected or perceived, then medicines that will destroy them should be administered.

Much is to be expected by a proper regulation of the general treatment, and more, indeed, than from medicine; wherefore, if the child who shows a disposition to become ricketty is an inhabitant of a city, it ought to be removed into the country, where a dry and elevated situation must be chosen, and be supported with a wholesome nutritive diet, giving it at the same time such exercise in the arms, or in any kind of open carriage, as it is capable of bear-

ing. It should not sleep on a feather bed, but on a mattress of hair or oaten chaff. In the day time it should be placed on a seat capable of making a uniform resistance, with a high straight back and without arms. It should be put on its feet as little as possible for a considerable time.

Apparatuses for obviating the deformity arising from the rickets have sometimes been employed, such as splints applied to the limbs, strong leather boots, and machines to the spine; but they are really useful only in those cases where the patient is of a certain age, and when the progress of the disorder is gradual, and the strength not much exhausted; and even in most of these cases the inactivity unavoidably occasioned by these machines is productive of disadvantages, which are by no means compensated by their good effects.

Deformity is not unfrequently met with in the bones of the spine in persons of a strumous habit or ricketty disposition, showing itself in a lateral or oblique twist more generally that by the antero posterior bend or gibbosity.

In the treatment of deformity of the spine, it is incumbent on me to reprobate all mechanical means in terms of strong disapprobation; and I likewise express it as my opinion, that the carrying of a weight on the head, as suggested by one or two medical practitioners, must in every case of contorted spine prove highly injurious. The means I would recommend to be employed in all such cases are friction, manipulation, attention to position, and gentle exercise daily in the open air. The horizontal and inclined plane so strongly recommended and much practised, there can be no doubt, when properly and occasionally used, is a very convenient and useful mode of obviating a disposition to distortion in young persons of a tall slender figure and delicate frame; but to confine an individual to it for many months, unless there is positive disease of the vertebræ or bones of the spine, (which may readily be ascertained by a proper examination and due attention,) is evidently useless, and must defeat the purpose intended.

OF WATER IN THE HEAD.

This disease, although sometimes occurring in persons of an adult age, is chiefly met with in children, particularly those of a scrofulous or ricketty habit. It rarely occurs after the age of twelve or fourteen years, and seems to originate in a weakened state of the brain itself. In some cases the immediate cause appears to be inflammation, which terminates by inducing an effusion of a watery fluid either in the cavities of this organ or on its surface; but in other cases, the cause would seem to be the same as that of the other species of dropsy, viz. increased exhalation or diminished absorption, or probably both conjoined.

Symptoms.—The disorder manifests itself with inactivity of body, languor, loss of appetite, sickness at the stomach, vomiting,

hot dry skin, flushing of the face, a parched tongue, and other febrile symptoms, which are succeeded by pains over the eyes, great sensibility to light, and a suffused redness of the eyes. The pain in the head comes on at intervals, is exceedingly acute at times, and occasions the sufferer to shriek out, while at the same time the forehead is compressed with the hand, there is extreme restlessness, a flushed countenance, disturbed sleep, and costiveness.

After a time, the pupils of the eyes become dilated, and squinting takes place; the pain in the head is much increased, particularly towards evening; but at length this diminishes, and drowsiness succeeds a constant state of watching. The pulse also, which before was increased in quickness, is now preternaturally slow and often intermitting, the pupils become more dilated, and do not contract on being exposed to the light, and double vision, or a complete loss of sight, with lethargic stupor, succeed.

This second stage of the disease having existed for a time (its duration being shorter or longer), the pulse again returns to a febrile state, and becomes so extremely small and quick as to be numbered with difficulty, the eyes are now inflamed and red, there is great difficulty of breathing with snorting, the evacuations are involuntary, and at length the patient is carried off by a strong convulsive fit.

The symptoms, therefore, which strongly characterize a collection of water in or on the brain, and distinguish it from other diseases, are the excruciating pain in the head, and intolerance of light, followed by squinting, dilated pupils, and profound stupor, as likewise by vomiting. At first the pulse is preternaturally quick, but afterwards it becomes slow and irregular.

We are to look upon the disease as ever attended with very great danger; but particularly so when there is constant stupor with loss of sight, a weak intermitting pulse, difficult respiration, involuntary evacuations, apoplectic snorting, or the head much enlarged.

An unequivocal and decided case of water in the head, is very seldom, if ever, cured by any medicine whatever.

Treatment.—The objects to be kept in view in endeavouring to afford relief in this disease, are to reduce inflammation in the first or inflammatory stage, and to promote the absorption of the fluid, if possible, when effusion has taken place either in the ventricles of the brain, or on its surface.

In children of a strong robust habit, the first step to be adopted is the drawing of a sufficient quantity of blood from the jugular vein of the neck, and where this cannot be done, then from the arm; to effect either of which, the assistance of a skilful surgeon will be required. After blood has been drawn from the system in this way, it may be advisable to have the head shaved, and a large blister applied to the neck, emptying the bowels immediately afterwards by a purgative of the submuriate of mercury joined either to rhubarb or jalap, which ought to be repeated every se-

cond or third day, as long as the symptoms point out an inflammatory or increased action in the vessels of the brain, or where there is foulness of the bowels, which is known by the stools having either a cadaverous smell, or being dark and slimy.

If the pain in the head and stupor are not relieved within twenty-four hours by these means, six or eight leeches should be applied to the temples, and blood be again freely taken away; for it is only during the first or inflammatory stage of the disease that bleeding can be practised with the probability of relief being obtained.

In addition to a blister to the neck, linen cloth wetted in cold water and vinegar may be kept constantly applied to the shaven scalp, temples, and forehead, taking care to re-wet them as often as they become dry or warm. The feet may be put into warm water towards the evening. When the blister which had been applied to the neck becomes dry, a fresh one should be laid over the whole of the head, promoting a discharge from it when removed by dressing the excoriated surface with the cerate of Spanish fly, or that of savine.

Where the febrile symptoms run high, we may give the saline medicine conjoined with the nitrate of potash and tartarized antimony, (see the Class of Antiphlogistics, P. 4,) in the dose of a pap-spoonful repeated every three or four hours.

These are the means which should be adopted during the first or inflammatory stage of the disease; but in the second stage, when effusion has taken place in the cavities of the brain, active remedies of a different nature must be employed to stimulate the absorbent vessels of this organ, for the removal of the accumulated fluid or serum. Mercury is one of the most powerful medicines that can be used for this purpose, and it may not only be given internally, but be applied externally over the blistered surface of the head in the form of ointment.

One grain of the submuriate of mercury joined with the like quantity of antimonial powder, may be given to the child three or four times a day, and about a scruple of the strong mercurial ointment be rubbed in every evening. It has been considered by some physicians that by combining the submuriate of mercury with jalap, in doses proportionable to the age of the patient, so as to procure a copious discharge of the green mucous stools which are usually voided in cases of water in the brain, much greater success may be expected than by giving it with antimony, or alone so as to excite a mercurial action in the system. It may first be tried combined with antimonial powder, and if no good effect is derived from its use in this way, then its junction with jalap may be substituted.

Foxglove (digitalis) has been recommended also as a remedy in the disease in question, both from its diuretic effects, and its possessing the power of diminishing arterial action. It is however a medicine which requires much caution in using it, being a power-

ful sedative. The best preparation of it in dropsy of the brain appears to be the tincture, of which from six to eight drops may be given every six hours, and be continued until it produces an evident effect upon the system.

Promoting a serous discharge from the nose might possibly be of service; and with this view a little of the compound powder of asarabacca, or one consisting of eight grains of powdered white hellebore and twenty of white sugar, well mixed together, may be used occasionally as snuff.

Throughout the whole course of the disease the child should be kept as much as possible in an erect position; but when confined from necessity to its bed, the head should be considerably raised by pillows rather of a hard nature, that there may be but little accumulation of heat. The diet ought to be spare and light, and to consist wholly of food in a liquid form during the whole course of the disease.

OF THE WHOOPING OR CHIN COUGH.

Adults are rarely affected with this cough; children are most commonly the subjects of it, and it is therefore placed among the diseases incidental to them.

Those who breathe a confined unwholesome air, who have too little exercise, and live upon a thin watery diet, are most liable to it, and they generally suffer much from it.

The whooping cough cannot be classed among those diseases which affect persons but once in the course of their lives, although a contrary idea has been entertained by some practitioners; but it must at the same time be acknowledged, that if an individual has once had this species of cough he is not very likely to be affected with it again.

The whooping or chin cough generally arises from contagion; but there is a principle independent of this, which is capable of producing the complaint, and this principle exists in the atmosphere. The disease therefore prevails epidemically at times, but does not appear to be influenced by any particular season of the year, although it has usually been observed to be more severe during the autumnal and winter months than those of the spring and summer. In general, it appears under a milder form in warm climates than in cold ones.

Symptoms.—The disease comes on with a slight difficulty of breathing, hoarseness, cough, thirst, quick pulse, and other symptoms of common catarrh. In the second or third week after the attack, it puts on its peculiar and characteristic symptoms. The fits of coughing become more frequent and violent than before, and in making a full and deep inspiration, a peculiar sound is produced, which has obtained the name of whoop. When this sonorous inspiration has happened, the convulsive cough is again renewed, and continues in the same manner as before, until a quantity of frothy mucus is discharged from the lungs, or the contents of the

stomach are evacuated by vomiting, which usually terminates the fit. If this has been severe, much apparent fatigue, general languor, debility, and a hurried respiration are apt to succeed ; but if not, the child is soon enabled to return to the amusements in which he was engaged before the accession of the fit, and to take his food as usual.

After a longer or shorter continuance of the disease, the attacks become less severe, have longer intervals between them, and at length cease entirely. In some instances the complaint has been protracted for several months.

When the disease is more than ordinarily violent, and has continued for some length of time, the symptoms generally become greatly aggravated, especially in the night ; and at each fit, the child will seem almost strangled, till, by a strong effort or whoop, it recovers its breath : the blood, from the exertion, will sometimes rush from the nose or mouth, and the eyelids put on an appearance of having received a blow.

The whooping cough, although a tedious disease, and apt to return with severity on any fresh exposure to cold, seldom proves fatal, except to very young children, who are always likely to suffer more from it than those of a more advanced age. A moderate and free expectoration, the strength but little reduced, the fits being neither frequent nor violent, the respiration tolerably free during the intervals, the appetite good, there being no fever, but a moderate discharge of blood from the nose, are to be regarded as favourable appearances. On the contrary, the disease occuring in children under two years of age or in those descended from asthmatical or consumptive parents, there being much fever, with oppression at the chest and difficulty of breathing, a very scanty expectoration, great debility or convulsions, denote imminent danger and the probable destruction of life.

The convulsive cough, followed by the peculiar sonorous inspiration, and terminating in vomiting or expectoration, will enable us very readily to distinguish the whooping cough from every other disease.

Treatment and Regimen.—The diet should be light and easy of digestion ; for young children, good bread made into pap or pudding, chicken broth, with other spoon meats, are most proper ; but those who are older may be allowed sago-gruel, arrow root, boiled chicken, or other white meats, provided the febrile symptoms do not run high. The drink may be barley water, toast and water, &c. and where the strength is very much reduced, a little weak wine negus may be allowed. At all periods of the disease a change of air will greatly benefit the patient, and this very material point ought never to be neglected.

In children of a full plethoric habit, or where the paroxysms of coughing are so severe as to occasion a determination of blood to the head, (evinced by a redness of the eyes and suffusion of the countenance,) the application of several leeches to the forehead

and temples will be highly advisable, and have been found very beneficial. Indeed, in such cases, a bleeding from the nose sometimes arises naturally, and never fails to afford great relief to the child.

If there is sickness at the stomach, a discharge of its contents may be promoted by giving a gentle emetic of a few grains of ipecacuanha, or a solution of tartarized antimony (see the Class of Emetics, P. 5,) in the dose of a dessert-spoonful every quarter of an hour until it operates. This will not only cleanse the stomach, but occasion the discharge of a considerable quantity of viscid mucus from the throat and lungs. It will also be likely to promote perspiration and other secretions, and ought therefore to be repeated occasionally (say every second or third day,) throughout the whole course of the disease.

Another point to be attended to is to keep the bowels gently open; and this may be done by a few grains of rhubarb joined with a grain of the submuriate of mercury, and mixed with honey or treacle to make it more desirable to the child, or by giving it a little manna dissolved in senna tea. Perhaps an attention to diet, and allowing the child roasted apples, stewed prunes and the like, may afterwards be sufficient alone to promote one or two stools daily.

In the early stage of the whooping cough, when the symptoms denote some violence, and there is much fever, with a hard full pulse and oppression at the chest, it will be necessary to palliate these by the application of six or eight leeches over this part of the body, but should these not procure decisive relief, a vein in the arm may be opened the succeeding day.

Where the difficulty of breathing is considerable, and has not been much relieved by the application of leeches or opening a vein in the arm, it may be advisable to apply a blister to the chest, and if the expectoration is scanty, the steams arising from hot water with a small addition of vinegar, may be inhaled several times a day. At night, the child's feet may be put into warm water, or its whole body be immersed in a tepid bath, if the blistered part should not prove an obstacle thereto.

The bowels being well cleansed, the following medicine may be given every four or six hours to a child of two years of age, and so in proportion to those who are more advanced. Take six drops of ipecacuanha wine, one drop of the tincture of opium, and three grains of the carbonate of soda, and mix them in a pap-spoonful of water sweetened with a little sugar. The medicine is to be continued for several days, obviating costiveness, should any occur, by a few grains of rhubarb conjoined with one or two of the submuriate of mercury.

In common cases of whooping cough, the treatment which has been pointed out will usually prove successful, but there are others which will more particularly require the care and skill of the medical practitioner. For instance, the cough will be so severe, and

be accompanied with so high a degree of spasmodic affection as to endanger suffocation. In these cases, opiates become necessary, and as such, a tea-spoonful of the syrup of poppies, or three, four, or five drops of the tincture of opium, in proportion to the age of the child, may be given in a little barley water, and be repeated if occasion requires it.

Other narcotic medicines, such as hemlock, henbane, aconite, nightshade, and foxglove, have at times been enployed in severe cases of the whooping cough. A grain of the extract of either of the two first may be given every six hours in any convenient vehicle, or a quarter of a grain of the others, gradually and most cautiously increasing the dose, if found necessary. If these fail in abating the violence of the coughing, I would recommend a trial to be made of the Prussic acid, in the dose of one drop in an ounce of almond mixture, repeating this morning, noon, and night, as I have experienced the most desirable effects from this medicine in several cases of whooping cough accompanied by much spasmodic affection. Children will not bear a larger dose of the Prussic acid, but adults may take it in doses of three if not four drops.

It sometimes happens that where the disease has been long protracted, it leaves the child in a very weak and reduced state on its going off. This, however, is to be obviated by giving tonic medicines, such as a decoction or infusion of the Peruvian bark, conjoined with some stomachic bitter, such as calumba, gentian, or cascarilla, (See the Class of Tonics, P. 7, 8, or 9,) adding to each dose thereof six or eight drops of diluted sulphuric acid, or about twelve or fifteen of the wine of iron. A change of air, gentle exercise taken regularly, and a nutritive diet, will prove powerful auxiliaries to the above medicines, at the close of so tedious and distressing a disease as the whooping cough not unfrequently turns out to be.

OF THE INFANTILE REMITTENT FEVER.

This fever is evidently symptomatic of a disordered state of the digestive organs. It attacks children from the age of one year to that of five or six, and comes on very gradually. The child at first becomes fretful, the hands are hot, the lips dry and parched, the breathing short and hurried, the pulse much quickened beyond its natural speed, and there is a pain in the head; the child is averse to speak or move, he rejects his food, and starts much. Sometimes the bowels are costive; at others there are frequent stools of a mucous and slimy nature. There are several slight accessions of fever each day, during which drowsiness prevails; but in the intervals the child appears tolerably well, although at times more fretful than usual.

The disease goes on thus for eight or ten days perhaps, and then a more violent attack than ever arises, preceded by shivering, and

not unfrequently a vomiting. The cheeks are now highly flushed, the drowsiness is much increased, the pulse beats from 120 to 140 in a minute, and the child is incessantly picking at the skin of the lips and nose, or that of the angles of the eyes.

This fever is mild at its commencement, slow in its progress, and very uncertain in its termination. It seems to arise from some irritating matter in the bowels.

Treatment and Regimen.—The first step to be taken is to evacuate the contents of the stomach by a gentle emetic of the powder of ipecacuanha, given in the evening, and on the succeeding morning the intestines are to be cleared of all offending matters by giving an active purgative, such as two grains of the submuriate of mercury with a proper number of either jalap or rhubarb, or we may give the dose of the submuriate of mercury mixed in a little jelly, and in two hours afterwards administer one ounce and a half of an infusion of senna, in which sulphate of magnesia to the extent of two drachms has been previously dissolved.

After the stomach and bowels have been properly cleansed, it may be of some service to the child to put it into a warm bath of a moderate temperature.

Where the head is very painful, and there are reasons to fear that too great a determination of blood to the brain has taken place, some of this fluid should be drawn off, either by applying several leeches to the temples or by opening the jugular vein, afterwards applying a blister to the nape of the neck, and linen cloths wetted in vinegar and water round the forehead.

For the purpose of determining the circulation to the surface of the body, small doses of some antimonial medicine, such as half a grain of the antimonial powder mixed in a little jelly, or a dessert-spoonful of the saline medicine with tartarized antimony (See the Class of Antiphlogistics. P. 4,) may be given every four or six hours, during the continuance of the fever and increased heat of the body.

Should the bowels be in an irritable state a table-spoonful of the chalk mixture, with three or four drops of the tincture of opium, may be administered between the doses of the purgative medicines before mentioned, for these are to be repeated occasionally throughout the course of the disease.

If the fever on subsiding should leave the child in a very reduced and debilitated state, some light preparation of the Peruvian bark, such as either the decoction or infusion, joined with calumba or cascarilla, (see the Class of Tonics,) may be given twice or thrice a day, in addition to a nutritive diet and country pure air.

OF WORMS.

These vermin are not unfrequently met with in adults, but as they are more apt to infest the bodies of children, they may very properly be arranged among the diseases incidental to them.

The worms which are usually found in the stomach and bowels of the human body are of three species, viz. the ascarides, or small, short, round, white worm, somewhat resembling the cuttings of thread, which are generally seated in the stomach and just within the fundament; the teres, or round worm, closely resembling the common earth worm, and seated most commonly in the upper portion of the small intestines, but sometimes lodged also in the stomach; and the tænia, or tape worm, which is flat, of a whitish colour, full of joints, and often many yards in length. It is commonly bred either in the small intestines or stomach, is the most hurtful species, and very difficult to eradicate, because it will frequently remain long in the bowels after it is dead, and is then seldom brought away but in detached parts, and that by the operation of powerful medicines. Children are, however, seldom troubled with the tape worm.

Symptoms.—The signs by which worms are known to exist in the human body are as follow: The appetite is variable, being sometimes voracious and at others lost or much impaired, the breath is fetid, there are acid eructations with occasional pains in the stomach and bowels, paleness of the countenance with frequent pickings at the nose, grinding of the teeth during sleep, hardness and fulness of the belly, slimy stools with griping, a heat and itching about the fundament, emaciation of the body, a short dry cough, slow fever, which generally suffers an increase towards evening, and sometimes convulsive fits supervene. The most certain sign, however, of their existence, is one or more having been discharged.

Causes.—Worms are seldom found but in such persons as labour under indigestion. They are generated by too free a use of unripe fruits, and those who live chiefly on vegetables are very apt to be affected with them. In sucking children, they not unfrequently arise it may be presumed from badness of the nurse's milk, and they often infest the bodies of such as are of a weakly constitution, and whose bowels contain a preternatural quantity of mucus or slimy matter. An hereditary disposition to have worms formed in the bowels and stomach seems to exist in some persons, as all the children of one family have been known to have been troubled with them. Sedentary persons of an adult age are more liable to them than those who lead an active or laborious life.

Worms are, in general, more troublesome than dangerous; but in some cases they perforate the intestines, and get into the cavity of the belly, or they induce erosions in particular parts, give rise to atrophy or a gradual wasting of the flesh and strength, or they

destroy life by the irritation they excite, and convulsive fits of the epileptic kind arising.

Treatment and Regimen.—The cure must be regulated by endeavours to destroy the vermin and procure their discharge from the body, and afterwards by preventing any future generation of them. Repeated observations and experience have, however, proved that the same remedies do not act equally alike on the different species of worms, and that each kind has apparently an appropriate antidote.

For the cure of the teres or round worm, the most effectual remedies that have yet been discovered, are the filings of tin and the hairy down which covers the pods of the cowhage, (Stizolobium, or the dolichos pruriens of Linnæus.) We may either give these separately or combined together. If we begin with the filings of tin, they may be given in doses of ten grains morning and night, mixed in a little honey or treacle ; but if we prefer the cowhage, which, I think, is entitled to a preference, this may be administered in doses of from six to eight grains every night and morning, mixed as above. This plan is to be persevered in for three days successively, and on the fourth morning, a purgative either of one ounce of castor oil, or of two grains of the submuriate of mercury (calomel), and from eight to ten grains of jalap mixed in treacle or thick syrup, must be taken to carry off whatever worms have been dislodged or destroyed. The doses of the castor oil and jalap are appropriate for children of ten or twelve years of age, and are to be diminished or increased according to the age, being more advanced or youthful. For young children it will be advisable to substitute six or eight grains of rhubarb in lieu of jalap. After an interval of two or three days, the doses of the vermifuge medicines may be again administered, and in due time the purgative also.

If neither the filings of tin nor the down of the cowhage produce the desired effect when given separately, they may then be combined together, as in the following form. Take of the coarse powder or filings of tin, two drachms, the down of cowhage, one drachm, and treacle or honey, half an ounce. Let them be well mixed, and a sixth part of the whole be given every morning and night for three successive days: on the fourth morning, a purgative of calomel and jalap, or one of castor oil, is to be administered, taking care to inspect the motions with the view of ascertaining whether or not any worms have been discharged.

Both the cowhage and tin act mechanically on the worms, and in this way dislodge them from the hold which they have taken of the inner coat of the intestines and stomach, and they are afterwards brought away in the stools by the purgative medicine. Some little precaution is necessary in handling the cowhage for the purpose of mixing it, as it excites intolerable itching in every part it falls upon, but it is a perfectly safe medicine, and may be given to very young children.

Should these remedies fail in bringing away worms, and we are, nevertheless, convinced that they do exist, it will be advisable to make a trial of the Indian Pink root (Spigelia) in powder. Of this, about ten grains will be a proper dose for a child of six or ten years of age, and it may be taken morning and night for three days, then interposing a dose of the submuriate of mercury, combined either with jalap or rhubarb as before-mentioned. Adult persons may take the Indian Pink in doses of half a drachm, repeated as before noticed, and on the fourth morning a purgative of a scruple of the powder of jalap, and four grains of calomel. This course ought to be persevered in for a fortnight or so.

As an auxiliary remedy in the cure of this species of worms, signal benefit is sometimes derived by applying externally over the region of the belly and stomach, a poultice or cataplasm made of the leaves of tobacco pounded and wetted in vinegar, or one of the fresh juice of the aloe plant formed of a due consistence with oatmeal. These remedies have been known to succeed after powerful vermifuge medicines, internally administered, have failed to produce any good effect.

It has been mentioned that the ascarides are usually seated in that portion of the gut which is nearest to the fundament, but are occasionally lodged also in the stomach. In the latter case, the medicines advised for the destruction of the round worm or teres must be employed, substituting the one for another if not found to produce the desired effect. In cases of the former nature, the most effectual way of destroying the ascarides will be by injections morning and night. Either of the following may be employed. Take two drachms of the oil of turpentine, and five ounces of thin gruel, and mix them well together; or take ten or twelve grains of the down of cowhage, and mix it in five ounces of an infusion of wormwood, or the like proportion of barley water. These quantities will be sufficient for a child of ten or twelve years of age: for adults they may be doubled.

If these injections do not answer, one consisting of half a drachm of aloes, dissolved in ten ounces of thin gruel, with the addition of half an ounce of castor oil, may be substituted for an adult; but for a child it should be reduced to one half.

As in cases of other worms, a purgative of the submuriate of mercury, conjoined with either jalap or rhubarb, ought to be given occasionally.

For the destruction of the tape worm, the male fern root (filix mas) has been much extolled, and the more recently it has been dug up the better, as its activity is much diminished by its being kept long. The proper dose for an adult is from one to two drachms, which may be taken in the morning on an empty stomach for two successive days, and on the third morning, a sufficient dose of the submuriate of mercury and jalap.

In the expulsion of this species of worm, the oil of turpentine has lately been discovered to be very efficacious. The proper dose

for a delicate woman is half an ounce, for one of a robust habit, one ounce, and for a stout man about one ounce and a half. It may be given in milk or water gruel, and produces a purging, during which the tape worm is either voided whole, or in detached portions.

A number of other remedies have been frequently employed with success for the destruction of worms of every species, and among these may be enumerated the subcarbonate of iron. The proper dose for children of from five to ten years of age, is from five to twenty grains, mixed in a little currant jelly or thick syrup.

Harrowgate water is also another excellent medicine for destroying worms, particularly the ascarides and round worms. As this water is strongly impregnated with sulphur, some have been induced to suppose that sulphur alone must be a good medicine in this case, and accordingly it has been given in considerable doses, and not unfrequently with success.

From its having been observed that those who do not use salt with their food are greatly predisposed to generate worms in their intestines and stomach, this has been proposed as a remedy for their destruction, and indeed it has been given with benefit.

Various indeed are the remedies and nostrums which are recommended for the cure of these vermin, particularly by quacks and worm doctors, as they are termed; but most of them contain a considerable quantity of mercury, and by being exhibited in an uncautious manner, are not unfrequently productive of very injurious consequences. Of this nature are certain lozenges, which of late years have been much puffed off.

After a course of any of the vermifuge medicines which have been noticed, we should employ such others as will tend to give the proper tone to the stomach and intestines, and prevent any other worms from forming therein, and which will be likely to happen as long as these organs remain in a weak and debilitated state. With this view, the patient may take half a drachm of the powder of Peruvian bark, with a table-spoonful of the wine of iron twice or thrice a day in an infusion of cascarilla or calumba. See the Class of Tonics, P. 4 and 5. Lime water, which loosens the adhesions of the worms to the intestines by dissolving the mucus in which they are involved, may also be taken with advantage in the quantity of half a pint a day mixed with milk, but it will be best to administer it in divided doses. Infusions or decoctions of bitter herbs, such as those of chamomile flowers, tops of wormwood, the lesser centaury, tansy, &c. may likewise be drank with some advantage.

The diet of persons who are either afflicted with worms or subject to generate them, should consist principally of animal food that is light, nutritive, and easy of digestion, abstaining from all crude vegetables and unripe fruits. A child who is subject to worms may be allowed a glass of red wine after its meals, as this will assist in bracing and strengthening the stomach. It should also have sufficient exercise every day in the open air.

OF CHILBLAINS.

This complaint is characterized by painful inflammatory swellings of no great size, but of a deep purple or leaden colour, and which are chiefly seated on the fingers, toes, and heels. Children and elderly people are most subject to chilblains; and the former who are of a scrofulous habit are very apt to suffer severely from them. They seldom appear but in the winter.

The pain which accompanies the complaint is sharp and very pungent at times, although not constant, and there is a severe itching in the parts affected. In some cases the skin which covers them continues entire, but in others it breaks, and then a thin fluid is discharged. Sometimes ulceration ensues.

Chilblains are occasioned by an exposure of the hands or feet for a considerable time to cold or wet, and afterwards too suddenly heating them by the fire, instead of employing frictions to the parts and using due exercise.

To prevent these affections from arising, it will be advisable after any exposure to cold, instead of allowing the person to go near the fire, that he should be kept at a distance from it, and the parts be first rubbed with snow, and then with salt and water. Those who are subject to them should be cautious on the approach of winter to guard against all unnecessary exposures to cold and wet, and not to expose their hands and feet too precipitately to any considerable degree of heat after unavoidable occurrences of this nature. On the approach of winter, these parts should be covered with woollen gloves and stockings.

On the first appearance of a chilblain, which is usually marked with heat, itching, redness, and swelling in the parts affected, by rubbing them well with equal parts of camphor liniment and oil of turpentine, the evil of its breaking is often prevented, particularly if the parts are afterwards covered with soap plaster spread upon fine lint, or a piece of fine soft linen, or we may apply for a constancy, pledgets of the same moistened in a wash, consisting of two ounces of the compound soap liniment, and one ounce of the solution of the acetate of ammonia.

If the swellings resist these applications and break, they must then be dressed with some digestive ointment, such as the resin cerate, which may be made still more efficacious and digestive by melting it afresh, and adding half an ounce of the oil of turpentine to two ounces of the cerate. Should what passes under the name of proud flesh arise in the ulcerations, they may now and then be dressed with a little of the ointment of nitrate of mercury, or the fungous parts be sprinkled with a little red precipitate. A flannel roller may be applied with advantage perhaps over the limb.

Where the parts are much swollen and inflamed, and the sores appear foul, poultices of linseed meal formed of a proper consistence with a diluted solution of the acetate of lead, and applied

cold, may prove serviceable, keeping the surrounding parts frequently moistened with camphorated spirit, or compound soap liniment.

OF THE DISEASES PECULIAR TO WOMEN.

Females are subjected to a variety of complaints, particularly during the different processes of menstruation, pregnancy, and child-bearing, to prevent and remove which, require the greatest attention and care: these then are to be pointed out.

OF MENSTRUATION.

The menstrual discharge is a natural periodical secretion of a blood-like appearance from the womb, which in cold climates usually commences in females about the age of fourteen or fifteen, and continues until they attain that of forty-five or fifty, but in different women we meet with some variety in this respect. In warm climates menstruation frequently commences at the age of ten or eleven years, and is seldom extended beyond that of forty.

In some females it comes on without any previous indisposition, but in most of them it is preceded by an enlargement of the breasts, together with a sense of fulness at the bottom of the belly or region of the womb, pains in the back, and in a few, by some slight hysteric affection. It is apt to be somewhat irregular during the first two or three visitations, both as to the period of its return, and the quantity of the discharge; but after these it appears at stated times, which is usually once a month, and nearly the same quantity is voided at each visitation, if regular. During the process of pregnancy and suckling most women cease to menstruate.

The quantity of the discharge varies in different women, owing to the differences of constitution and other circumstances, being from four to eight or ten ounces. In some women it continues to flow for three or four days, in others for five or six; females of a delicate frame having usually not only a more copious, but likewise a longer continued discharge than those of a robust constitution.

Women rarely, if ever, become pregnant before menstruation has taken place with them, and very few bear children after its perfect cessation, which appears to show that it was designed by nature for the support and welfare of the child during its abode in the womb, as well as to fit the female organs of generation for impregnation. In the opinion of that able physiologist, Mr. Abernethy, it relieves uterine irritation, and mitigates the extreme of sexual desire, thereby enabling a woman to conform to the laws of morality, and the social compacts that are established between us. I will not expatiate further on the nature of the menstrual discharge, but be content with observing, that the times both of its

first appearance and its cessation are critical periods in the lives of females, and require the greatest attention and care.

The health of females much depends upon the regularity, both as to the time and quantity of this periodical secretion, and considerable injury may be occasioned by its not appearing at the proper age, from its being suppressed, from its flowing in an immoderate quantity, or being accompanied with severe spasmodic pains. At the period at which menstruation is on the decline, and about to cease, the health may also become affected if not properly attended to.

OF A RETENTION OF THE MENSES, OR CHLOROSIS.

This is only to be considered as a disease when the system becomes somewhat deranged by a want of the discharge; in which case the woman is affected with lassitude, heaviness, fatigue on the slightest exercise, pains in the back, loins, and hips, palpitations at the heart, acidity in the stomach and bowels, flatulency, costiveness, and an unnatural appetite for chalk, lime, and other absorbents. After a time, the countenance assumes a yellowish hue, even verging upon green, from whence the complaint has been named green sickness; the lips become of a pale colour, the eyes have a blue circle round them, the breathing is hurried by any vigorous exertion of the body, the pulse is quick and small, the appearance of the woman indicates a want of power and energy in the constitution, the skin is pale and flaccid, the feet are affected with dropsical swellings, the sleep is disturbed, and there are frequent faintings and other hysteric symptoms. A slight degree of hectic fever not unfrequently occurs.

Causes.—A retention of the menses may be occasioned by whatever has a tendency to impede the due action of the arteries of the womb, or from some preternatural resistance in their extremities.

Treatment and Regimen.—The objects to be kept in view in the treatment of this disease, are to give energy to the whole system, and excite the proper action of the vessels in the womb.

The first of these is to be promoted by a generous nutritive diet, with a moderate allowance of wine, cheerful society, the benefit of pure air, and proper exercise, as walking, riding on horseback, and dancing, if the patient is capable of bearing it. The spirits should be supported, and all passions of the mind of the melancholy or desponding kind be guarded against as much as possible. With the view of keeping the attention engaged and the mind amused, if the circumstances of the patient will admit of it, she should resort to some of the fashionable watering places, but more particularly Bath and Tunbridge wells. A retention of the menses is often entirely removed by a course of the water of the former; women of an irritable habit, taking care, however, not

to drink more than a pint a day. These waters may also be employed as a warm bath, which will contribute to remove that languor of circulation and obstruction of the natural evacuation, which are leading features of the disorder.

A course of the Tunbridge well water also will be proper for women labouring under this disorder, and it may not only be drank when made of a tepid warmth, but be used occasionally as a warm bath, if heated to about 85 degrees of Fahrenheit's thermometer.

A retention of the menses is most generally met with in females of a relaxed, debilitated habit, and pale sallow complexion, and therefore bleeding or powerful evacuations by strong purgative medicines, will be injurious. It may, however, be serviceable to promote a regular discharge by stool once a day if the bowels are inactive, by directing the patient to take two of the aloetic pills with myrrh at bed-time, as the occasion may require. Throughout the course of the day the system is to be strengthened, and digestion promoted by the Peruvian bark, with other bitter stomachic and chalybeate medicines, various forms of which are given under the head of Tonics.

If at any time the patient perceives a disposition in the parts to throw out the menstrual discharge, she ought to encourage it by sitting over a pan filled with warm water, and fomenting them from time to time with a large piece of sponge dipped therein, and she may also put her feet into warm water.

To assist these means in exciting the action of the vessels of the womb, and in addition to proper active exercise, friction with the hand over the region of this organ may be employed frequently. Slight shocks of electricity passed through it and the neighbouring parts, and duly persevered in, may be tried, if other means fail in producing the desired effect.

OF DEFECTIVE OR SUPPRESSED MENSTRUATION.

When menstruation has taken place with proper regularity, and has continued for some months, and then becomes obstructed or suppressed, the disease in question may then be said to exist.

Symptoms.—Those which attend it are pains in the head, back, and loins, costiveness, indigestion, hysteric affections, hemorrhages from the nose, stomach, lungs, and other parts of the body, and colic pains. At times, some inflammatory symptoms present themselves, and then the pulse is hard and frequent, and the skin hot.

Causes.—Defective or suppressed menstruation may arise from an exposure to cold in various ways, particularly wet feet, from fear or any emotion suddenly excited, from a poorness of the blood or debility of the system, causing a weakened action of the vessels of the parts, and perhaps not unfrequently by too free a use of vinegar and other acids, for the purpose of preventing obesity, which at length impair the due action of the stomach and other digestive organs.

Where menstruation becomes suppressed suddenly by exposure to cold in any way, it may in general be again restored by a pursuance of proper means; but where the suppression is of long standing, and the whites have appeared as a substitute, the disease usually proves very difficult to remove. The opinion we are to form as to the result must be governed by the cause which has given rise to it, the state of the woman's health in other respects, and the length of time that the suppression has existed.

Treatment and Regimen.—Every attentive observer must be aware that if there be cases of obstructed or suppressed menstruation, where the fluid is tardily secreted from local or general debility, there are many other cases where an opposite state of the frame becomes the cause of their production. It will therefore be highly necessary in the treatment of these complaints, that the morbid peculiarities and habits of life of the patient be taken into consideration: let the sanguine have her excess of fulness diminished: let the debilitated have her powers augmented. In short, let the constitution be strengthened, and the functions of health will, in all probability, be restored. To treat the disease judiciously and with advantage, therefore, it will be highly necessary to discriminate whether it proceeds from an overfulness of habit, or the blood being thin and defective. If it proceeds from a viscid state of the blood, or if the woman be of a robust habit, the effects of fulness in the vessels produced thereby, is to be obviated by abstemiousness with an increase of exercise, assisted by moderate bleedings and laxative medicines. See this Class, P. 7 or 8. Warm fomentations may also be applied over the region of the womb, the feet be bathed in hot water, and a light diet be enjoined. Where there are spasmodic pains at the bottom of the belly, an emollient clyster of thin gruel, with thirty or forty drops of the tincture of opium, may be administered.

The application of cold and other accidental circumstances, may occasion an interruption of the menstrual discharge, and excite fever in the system. In such cases confine the patient to bed, supply her with cooling drinks, open her bowels by some mild aperient medicine, (See Class of Laxatives, P. 10 or 11,) and if other remedies are afterwards necessary, give her the saline draught (See P. 4 or 5, Class of Antiphlogistics,) every four or six hours.

Should poverty of living, a sedentary life, confinement within doors, breathing an impure air, or other causes, have injured the general health, and induced debility with an obstruction of the menstrual discharge, it will then be necessary to invigorate the frame by every means in our power. The stomach and digestive organs must be strengthened by food of a light but nutritive nature, and by mild bitters, proceeding gradually to the use of more powerful tonics, such as bark, sulphate of quinine, and steel. When the constitutional weakness has been removed by these means, we may then have recourse to stimulants, such as spices, ammonia, essential oils and wine, savin, black hellebore, Spanish fly, some of the resinous gums, electricity, and horse exercise.

Half a drachm of the compound tincture of savin may be given twice a day in some aromatic bitter draught, (See P. 5, 8, or 10, Class of Tonics,) gradually increasing the dose of the tincture to one drachm ; or we may occasionally substitute a drachm of the tincture of black hellebore in an infusion of cascarilla, or the like vehicle. If these do not produce the desired effect, a trial may be made of any of the prescriptions given under the head of the Class of Emmenagogues. Aloes, by stimulating the lower part of the intestinal tube, and being conjoined with gum galbanum, (as in P. 1st of this Class) may be likely to produce a good effect, and should be considered as preferable to saline or oily purgatives.

OF AN IMMODERATE FLOW OF THE MENSES.

The menstrual flux is said to be immoderate when it either proceeds so far, or continues so long, or returns so frequently, as to prove prejudicial to the woman. The quantity discharged by a healthy woman, and who is regular, is usually from four to six ounces at each visitation : the time of its continuance varies in different women, but it rarely continues longer than five or six days, and seldom less than three, not ceasing suddenly but in a gradual manner, and the usual period of its visitations is from twenty-seven to thirty days. Women of a lax and delicate constitution, as has already been observed, have a more copious and longer continued discharge than those of a robust habit.

Symptoms.—When an immoderate flow of the menses arises from an overfulness of blood in the vessels, it is frequently attended with head-ach and giddiness, pains in the back and loins, some degree of thirst and heat, and a strong quick pulse ; but where it arises from general debility, or partial weakness of the vessels of the womb, and such attacks are frequently repeated, paleness of the countenance, chilliness, flabbiness of flesh, a hurried respiration on the slightest effort, unusual fatigue on exercise, coldness of the extremities, together with a loss of appetite, indigestion, and various nervous symptoms, arise. If the disease has been of long standing, and the attacks have been severe and frequent, the feet and legs show a dropsical tendency, become distended with a watery fluid, and have a puffy appearance.

Causes.—An immoderate flow of the menses may be occasioned by a general fulness of habit or plethoric state ; by accidental circumstances determining the blood forcibly and copiously to the vessels of the womb ; by irritations acting particularly on the womb ; by organic affections ; by relaxation of the womb arising from repeated miscarriages, difficult or tedious labours, or very frequent child-bearing ; and lastly, by debility of the whole system.

The proper criterion by which the danger of this species of hemorrhage can be estimated, is the strength of the patient and the pulse. If the woman be very much reduced, the pulse consi-

derably sunk, and the strength exhausted, she may soon fall a victim to the flooding, if prompt and efficacious means are not resorted to; but where it arises from an overfulness of blood, and the body still remains vigorous and strong, with no great loss of appetite, danger need not be apprehended, although the discharge is increased beyond its natural or usual quantity.

Treatment and Regimen.—When there are no appearances which denote an increased action in the vessels of the womb, and there are strong reasons for attributing the augmented flow of the menses to a laxity of the vessels, after placing the woman in a recumbent position, with her hips somewhat higher than her head, in a chamber of a cool temperature, desiring her to drink cooling acidulated liquors, such as lemonade, a solution of the supertartrate of potash in water with sugar and lemon juice (known by the name of Imperial), or that of preserved tamarinds, and applying linen cloths wetted in cold water and vinegar to the back and private parts in those cases where the hemorrhage is considerable, we should have recourse to medicines of an astringent nature, such as the acidulated infusion of red roses with alum, catechu, gum kino, &c. as in the following forms: Take six ounces of a strong infusion of red roses, acidulated with as much diluted sulphuric acid as will give it a sharp taste; then add half a drachm of alum and two drachms of the tincture of catechu; or take of the above acidulated infusion of roses, five ounces, tincture of gum kino, one drachm, and the nitrate of potash, half a drachm. The dose of either of these may be three table-spoonsful every four hours or oftener, the patient being kept at the same time perfectly still and quiet, and very lightly covered with bed clothes.

Where the hemorrhage is attended with spasmodic pains at the bottom of the belly, a small dose of opium, such as six or eight drops of its tincture, may be added to each dose of the above medicines; but as this drug is apt to relax the system when freely used, it should not be administered in cases where there is great debility, unless spasmodic pains accompany the flooding.

If the hemorrhage is profuse, and is not checked by the means which have been pointed out, we must substitute the superacetate of lead or sulphate of copper. Either of these, in the quantity of half a grain to one grain and a half, made into a pill with a little confection of roses, and taken every four or six hours, will be advisable. It may be washed down with a draught, consisting of two ounces of the simple or unacidulated infusion of roses, (as acids are incompatible,) having ten grains of alum previously dissolved in it. These remedies are to be assisted at the same time by throwing astringent injections from time to time up the vagina. See the Class of Astringents, P. 19, 20, 21.

Should these means prove ineffectual, the passage must be plugged up with dossils of lint, or fine tow, dipped in cold water and vinegar, by which means the mouths of the vessels that throw out the blood will be stopped up by the clots which will be formed in the womb and passage thereto.

Where a profuse flow of the menses is attended with severe pains in the loins, and the woman is of a full plethoric habit, it may be proper to draw off a few ounces of blood at the commencement of the complaint, but bleeding will not otherwise be required. Even in such cases, keeping the body properly open by laxatives, (see this Class, P. 4 or 6) and giving cooling medicines, such as the nitrate of potash with the saline mixture, (See the Class of Antiphlogistics, P. 4) making use of a spare regimen, and drinking cold acidulated liquors as before mentioned, will, in general, be sufficient.

In those cases where menstruation is profuse, continues longer than ordinary, and returns more frequently than it ought, in consequence of general laxity in the constitution, as well as in the parts more immediately concerned, and not from an overfulness of blood, it will be advisable during the intervals of the visitations for the woman to enter on a course of the Peruvian bark, bitter infusions of calumba, cascarilla, &c. together with chalybeates, various forms of which remedies are given under the head of Tonics. The Tunbridge well water may likewise be drank, if the circumstances of the patient will admit of it. To assist the effects of all these remedies, a generous nutritive diet and wine, with gentle horse exercise, and the occasional use of a cold bath, may be employed at the same time.

OF A CESSATION OF THE MENSES.

The constitution of women undergoes a considerable change on the menses being about to cease, or their wholly disappearing, and this period (commonly called by them the turn of life) is a very critical one, and requires great attention, otherwise the foundation of several troublesome complaints may be laid. The time of life at which menstruation ceases in cold climates, is from forty-two years to fifty. It seldom stops all at once, but becomes gradually irregular, both as to the periods and the quantity.

If the change in life be passed over without much inconvenience or disease, the woman may probably enjoy a permanent state of good health for a long time; but if at this period she is troubled with sickness at the stomach, pains in the head and loins, giddiness, and other troublesome symptoms, these may either be the forerunners of apoplexy, or a diseased state of the lungs, or possibly some obstinate chronic affection of the womb may be the consequence.

Treatment and Regimen.—Women of a full habit and robust constitution, who experience pains in the head with giddiness on menstruation becoming scanty or wholly disappearing, should have blood drawn from the temples by means of a few leeches, or from the back of the neck by the scarificator and cupping glasses. They should likewise keep their body very open by some mild laxative medicine, such as the electuary of senna, or one or

two pills of aloes, taken at bed-time. They ought likewise to confine themselves to a spare moderate diet, and take sufficient active exercise twice a day.

Should an ulcer break out in the legs, or any other part of the body on a cessation of the menstrual discharge, it may be looked upon as a critical effort of nature in many cases, and ought therefore not to be hastily healed up without substituting an issue in its stead.

If the womb becomes enlarged and scirrhous after a cessation of the menstrual flux, as sometimes happens, the disease is to be palliated by keeping the bowels open with laxative medicines and aperient clysters, by fomentations applied over the region of the organ, and by administering internally small doses of opium from time to time, or else a pill, consisting of from two to five grains of the extract of hemlock, avoiding at the same time much walking, and all other exciting causes.

OF THE WHITES, OR FLUOR ALBUS.

This disease consists in the discharge of a thin mucous matter from the organs of generation, varying both in colour and quantity in different women, being usually of a pale yellow or green appearance, and sometimes of a very acrimonious nature.

Symptoms.—Besides the discharge, which is of an irregular nature, the patient is frequently troubled with pains in the back and loins, failure of appetite, paleness of the countenance, chilliness and languor, an uneasy sensation in the stomach, loss of strength, and a wasting of flesh. The sleep is disturbed and does not afford refreshment, the mind is dejected and apprehensive, the urine turbid, the menstrual discharge scanty and sometimes even suppressed, respiration is difficult, palpitations of the heart and other nervous symptoms are experienced, and where the disease has been of long standing and the body debilitated, the feet and ankles swell and are distended with a watery fluid.

Causes.—An immoderate flux of the menses, frequent miscarriages, profuse evacuations, tedious and difficult labours, laxity of the parts, an inactive and sedentary life, a poor vapid diet, blows in the back, falls, &c. may give rise to the complaint. Delicate women are most subject to it, but it is occasionally met with in those who are strong and robust. Such as have had many children are very liable to the whites, and the discharge generally re-appears soon after the monthly period of menstruating has passed.

It is sometimes difficult to distinguish the whites from a clap, but, by attending to the following circumstances, a proper discrimination between them may generally be made with tolerable accuracy. In the whites, the discharge is irregular, and comes away frequently in considerable quantity and in large lumps, and is neither preceded by or accompanied with heat of urine or any inflammatory affection of the external parts; whereas in a clap (gonor-

rhæa), there is an itching and swelling of these parts, and much heat in making water, and occasionally there is either an enlargement of the glands in the groin, or some degree of ulceration externally or internally.

The whites is a complaint which seldom ceases of itself; and, if allowed to go on for any length of time, undermines the constitution, reduces both the flesh and strength, and not unfrequently gives rise to dropsical swellings of the feet and legs, or hectic fever ensues.

Treatment and Regimen.—Women who are afflicted with the disease in question should make use of a generous nutritive diet, consisting of gelatinous broths, light meats, eggs, jellies, blancmange, sago, arrow root, and milk boiled up with isinglass, and a moderate quantity of Port wine should also be taken daily. They should avoid all remote causes of the complaint, particularly too free an indulgence in sensual gratification; they should lie on a mattress in preference to a feather bed, rise early, and take proper exercise daily, either on horseback or in a carriage; and every night and morning they ought to perform due ablutions with a sponge dipped in cold water from a large basin or bidet, especially if the season of year and other circumstances prevent general cold bathing. In the winter they should be warmly clothed, and wear sliders made of flannel. Where there is great chilliness with languor, the use of a soft flesh brush may be beneficial.

To strengthen the system when it is complicated with general debility, besides a restorative diet and the means just mentioned, it will be necessary to put the patient under a course of the Peruvian bark with some mineral acid, bitter infusions of an astringent and stomachic effect, preparations of myrrh and steel, or mineral waters of a chalybeate nature. Various forms of these medicines are given in the Class of Tonics, to which I beg leave to refer the reader.

With the view of diminishing the quantity and acrimony of the discharge, in addition to a diligent attention being paid to cleanliness by proper ablutions, it will be advisable to employ some kind of astringent injection (see the Class of Astringents, P. 17, 20, or 21,) twice or thrice a day. This is to be thrown up the vagina by means of the syringe adapted to females. If there are any excoriations either internally or externally in consequence of the discharge becoming acrimonious, the parts may be smeared with a little cerate of the acetate of lead, after being well cleansed by washing them.

If the woman is incommoded by pains in the back and loins, she may have a large piece of leather spread with compound pitch plaster applied over these parts, avoiding at the same time as much as possible a standing position of any continuance, or any violent exertion, such as much walking or dancing.

Should the bowels be confined, some mild laxative, such as one of the aloetic pills with myrrh, or a few grains of rhubarb and magnesia, must be taken occasionally to obviate costiveness.

Astringent medicines have sometimes been administered by the mouth as well as used in the form of injection, and those most employed internally are, alum, gum kino, catechu, and the sulphate of zinc; but they appear to have no decisive effect when given separately from Peruvian bark and sulphuric acid, bitter infusions, and chalybeates, as before mentioned.

Turpentine and other balsams, which act on parts in the neighbourhood of the womb, have been found to afford relief in many cases of fluor albus. Balsam of copaiba being one of this class, has been much used, and may be taken either separately, in the dose of a small tea-spoonful morning and night, or be mixed up into the form of an electuary, with Peruvian bark, as follows: Take half an ounce of bark, two drachms of the subcarbonate of iron, and as much balsam of copaiba as will form the whole of a due consistence. Of this, the bulk of a nutmeg may be taken morning, noon, and night. Should costiveness be produced, some gentle laxative must be given occasionally to remove it.

OF PREGNANCY, AND THE COMPLAINTS INCIDENT THERETO.

In this country two hundred and eighty days are considered as constituting the full period of a woman's going with child.

Pregnancy is accompanied in its different stages by many complaints, which, although they cannot be wholly removed but by the birth of the child, admit nevertheless of being mitigated by the adoption of suitable means. Its first stage is usually accompanied with sickness at the stomach and vomiting in the morning, suppression of menstruation, indigestion, heart-burn, longings, giddiness, and not unfrequently tooth-ach, or a slight cough. Soon afterwards the breasts become enlarged, shooting pains are felt in them, and the circle round the nipple, which was before of a light red, becomes of a brown colour. Some women are but little affected by pregnancy, whilst others again are troubled with frequent nausea, can retain but little on the stomach, lose their flesh and strength, become irritable and peevish, and suffer a total alteration of countenance, every feature of which is considerably sharpened.

During the second stage there is some enlargement of the belly, a frequent inclination to void urine, with partial suppressions of it occasionally, itching about the external parts of generation, costiveness, and the piles. Between the sixteenth and twentieth week after conception, the woman becomes sensible of the motion of the child in the womb, and in addition to the complaints by which she was before incommoded, she is apt to be attacked with sudden faintings, and some slight hysteric affection.

The third stage of pregnancy (which consists of the last three months) is usually attended by general uneasiness and restlessness, particularly at night, cramps in the legs and thighs, swellings of the

feet and ankles, difficulty of retaining the urine for any length of time, varicose swellings of the veins in the belly and legs, and the piles. Convulsions are apt to arise near the period of child-birth in women of an irritable habit, and these are always to be considered as highly dangerous. Discharges of blood sometimes take place, and give rise to a premature birth or abortion.

Some of the symptoms attendant on pregnancy are to be considered as more troublesome than of a serious nature; but others are of complicated and injurious tendency, and require to be palliated by art.

HEAD-ACH AND DROWSINESS.

These sometimes arise from a fulness in the vessels owing to the stoppage of menstruation, and in strong robust women are to be relieved by drawing six or eight ounces of blood from the arm, keeping the bowels afterwards open by some gentle laxative medicine, such as the electuary of senna, of which the bulk of a nutmeg or small walnut may be taken occasionally at bed-time. In women of a delicate constitution, bleeding in any way should not be resorted to; the forehead and temples may be rubbed with a liniment consisting of one ounce of camphorated spirit and two drachms of sulphuric æther, and the nostrils be stimulated at times by smelling at volatile salts, or spirits. If the bowels are costive, some gentle opening medicine will be proper.

HEARTBURN AND INDIGESTION.

Acidity in the stomach gives rise to these complaints, and they are to be obviated by directing the patient to take about half a drachm of magnesia once or twice a day. If this in its simple state is not found sufficiently active, fifteen or twenty drops of the solution of ammonia may be added to the water in which the magnesia is mixed.

NAUSEA AND VOMITING.

Many women suffer much during the early stage of pregnancy from these complaints, and are greatly reduced both in flesh and strength by them. They usually come on soon after getting out of bed every morning, and may in some measure be obviated by the woman not rising soon after taking her breakfast. Should the vomiting be at any time so severe as to endanger a miscarriage, it may be advisable for her to take a saline draught in the act of effervescence now and then, with a few drops of the compound spirit of lavender added thereto; or, if necessary, eight or ten drops of the tincture of opium. If these means do not answer the desired intention, a few ounces of blood may be drawn from the arm, which will be likely to alleviate the irritation, particularly in

women of a full and robust habit, and linen cloths wetted in equal parts of tincture of opium and sulphuric æther be kept constantly applied at the same time over the region of the stomach.

COSTIVENESS AND THE PILES.

To obviate these consequences of pregnancy, it will be advisable for the woman to take some cooling aperient medicine (see the Class of Laxatives, P. 14 or 15,) frequently. When piles are very painful, do not bleed, and project much beyond the fundament, two or three leeches may be applied round the inflamed and protruded part, encouraging the discharge of blood after they drop off, by bathing the wounds with a sponge dipped in warm water. When the bleeding has ceased, a lotion, consisting of five ounces of common water, to which has been added twenty drops of the solution of acetate of lead, may be used several times a day, or a bit of soft linen rag wetted therewith may be kept constantly applied.

FREQUENT INCLINATION TO VOID URINE.

This is often troublesome to women in the pregnant state, and is owing to the pressure of the womb in its enlarged condition on the neck of the bladder. A recumbent posture, and keeping the bowels gently open, are the only means that can be adopted to alleviate it: delivery alone can remove it.

SUPPRESSION OF URINE.

In cases of extremity, where the urine cannot be voided, and the bladder becomes distended and painful, the immediate assistance of a surgeon will be necessary to draw it off by means of a catheter. Where there is only a trifling difficulty in making water, applying warm fomentations over the region of the bladder, and emptying the bowels by emollient laxative clysters, will in general be sufficient.

HYSTERIC AFFECTIONS.

Pregnant women are very subject to sudden faintings and other hysterical symptoms, particularly when they quicken, or first perceive the evolutions of the child. In such cases, all that is requisite is to place the patient in an horizontal position, admit cool air freely to her, and give her a little cold water with a few drops of the solution of ammonia added to it. If necessary, the nostrils may also be stimulated by holding volatile salts to them.

DIARRHÆA.

A purging in pregnant women may be occasioned by the same causes as in other persons, and as a miscarriage may be the consequence if long continued, it ought to be properly checked by medicines of an appropriate nature. We may make trial of the chalk mixture, (see the Class of Absorbents, P. 4,) with an addition of eight drops of the tincture of opium to each dose, and if this does not answer the purpose, the discharge must be restrained by astringents. See this Class, P. 6, 7, or 8.

CRAMPS.

The legs and thighs are apt to be affected with severe cramps in pregnant women, particularly by night, and when such occurrences take place, are to be relieved by rubbing the parts affected with a liniment composed of one ounce and a half of camphorated spirits, half an ounce of tincture of opium, and the same quantity of sulphuric æther.

RESTLESSNESS AND INABILITY OF SLEEPING.

Towards the latter stage of pregnancy these symptoms are apt to prove very troublesome, the patient being frequently obliged to get out of bed, and expose herself to the influence of cool air. Keeping the bowels open with some mild laxative medicine will be the safest remedy in such cases, and if this does not sufficiently answer, a few ounces of blood may be drawn from the arm, particularly if the woman is of a full habit.

FALSE PAINS.

Pains somewhat resembling those of labour are apt to be perceived at an advanced stage of pregnancy, and to occasion alarm. Confining the woman to an horizontal position in such cases, giving her laxative medicines, and administering aperient clysters, if her bowels are confined; drawing off a few ounces of blood from the arm if she is plethoric or of a full habit; and allaying spasmodic irritation by giving small and frequent doses of opium (such as eight or ten drops of its tincture in a little cinnamon water) until the pains are abated, will be the most appropriate means.

Where the pains arise from indigestion and flatulency, stomachic bitters joined with aromatics (See the Class of Tonics, P. 10, 11, or 16,) must be administered; or from a diarrhæa accompanied by gripings, they should be relieved by absorbents joined with some anodyne, such as the chalk mixture with ten or twelve drops of the tincture of opium added to each dose.

A DRY COUGH.

This is not an unfrequent attendant on pregnancy, and is sometimes accompanied by a difficulty of breathing. It is to be relieved by bleeding to a moderate quantity, the patient taking some pectoral medicine (see the Class of Expectorants, P. 1,) from time to time, and avoiding all food of a heating or flatulent nature. When it makes its appearance in the latter months, from pressure of the distended womb upwards against the diaphragm and lungs, nothing is to be done by art, as the symptoms can only be expected to subside on the delivery of the woman.

Some women are more healthy during their pregnancy than at any other time; but this is by no means the case in general, as many are more or less indisposed during the whole period of gestation. Few fatal diseases, however, happen during that period, and with an exception to abortions and convulsions, hardly any that can be regarded as dangerous.

ABORTION OR MISCARRIAGE.

When a woman in a pregnant state parts with her burden before the seventh month, she is said to have miscarried; but the term labour is made use of when she is delivered of it after this period, and by proper care and attention, the child may often be preserved alive, and reared even at this early stage of its existence.

Some time back an opinion was prevalent that a child born at eight months was not so likely to be reared and live as one produced at the seventh month; but the opinion is erroneous, for the nearer the child reaches to the full period of nine months, the greater is the chance of its prospering; and therefore I should say that an eight months' birth is preferable to a seventh.

An abortion may happen at any period of pregnancy, but more frequently during the second or third month. Sometimes, however, it takes place in the fourth or fifth, and even sixth month: the later, the greater will be the danger.

Symptoms.—Abortions are often preceded by slight pains in the loins and about the lower region of the belly, flaccidity of the breasts and a general sensation of coldness, and in full plethoric habits, by some degree of febrile action. Soon after these, a slight discharge of blood is perceived; and this continuing to increase, is apt to gush out in a free stream, then to have clots formed, and to stop for awhile, but to return again, accompanied by a sense of bearing down, sickness at the stomach, and faintings. At length the abortion takes place, and after the expulsion of the contents of the womb, the hemorrhage soon subsides in general, and is succeeded by a watery discharge discoloured with blood.

Causes.—There are many causes which concur to produce miscarriages, such as violent exercise, lifting great weights, dancing,

jumping, or stepping from an eminence, blows on the belly, falls, violent passions or affections of the mind, as fear, grief, &c. weakness or general relaxation of the mother, great evacuations, the death of the child, the fatiguing dissipations of fashionable life, excessive venery, uncommon longings not gratified, and overfulness of blood.

The danger attendant on an abortion is to be estimated by a due consideration of the previous health and constitution of the woman, the violence of the discharge, the duration of the threatenings, the difficulty which has occurred in checking it, the disposition to the expulsion of the contents of the womb, and the period of pregnancy at which the abortion is likely to take place. The further the woman is advanced therein, the greater will be the danger from floodings, especially if unaccompanied by labour pains. Although miscarriages before the fifth month are not generally attended with immediate risk, the loss of blood being usually moderate, still by occurring frequently (for some women miscarry at a stated period for several successive pregnancies) they are apt to lay the foundation of many other diseases and undermine the constitution.

Treatment and Regimen.—As soon as any appearances of an abortion present themselves, the woman should be laid in bed on a mattress, having her hips somewhat more elevated than her head. She should be covered only lightly with clothes, and kept extremely quiet; be debarred of all food of a heating or stimulant nature, and confined to light broths, gruels made of oatmeal, preparations of rice and milk, jellies, and the like, all of which ought to be given cold. For drink, she may take lemonade, imperial, toast and water, or any cooling acidulated liquor. It will also be proper to have linen clothes wetted in vinegar and cold water, or a solution of nitre in the same, applied to the private parts and loins. If ice can be procured, this may be pounded and enclosed in a bladder, and thus be substituted as a topical application over the region of the womb and other parts if the wet cloths do not produce a sufficient effect. Injecting a full stream of cold water may also be worthy of a trial.

In women of a robust habit, and where the pulse is frequent and full, it may be advisable to take away a few ounces of blood from the arm, then to open the bowels by some gentle aperient medicine, such as half an ounce of castor oil, or a drachm of the supertartrate of potash, and two drachms of the sulphate of magnesia, dissolved in a little thin gruel or water; and after one or two motions have been procured, then to give about two ounces of the acidulated infusion of roses with eight or ten grains of nitre, which dose may be repeated every four hours during the continuance of the hemorrhage. Where this is accompanied with severe pains, or irregular spasmodic contractions of the womb, ten or twelve drops of the tincture of opium may be added to each draught.

If the woman is affected with vomiting, let her frequently take two or three table-spoonsful of the saline mixture in an effervesc-

ing state, or should she be seized with a purging, this must be arrested in its progress by the chalk mixture. See the Class of Absorbents, P. 5.

Where the flooding resists all these means, and continues profuse, the vagina or passage to the womb should be plugged up by introducing into it either a sponge soaked in a strong solution of alum with equal proportions of cold water and vinegar, or a piece of soft linen cloth dipped in oil and gently rung out. This is to be introduced with the finger, portion after portion, until the lower part of the vagina be sufficiently filled, and is then to be supported by a proper bandage passed round the loins, having the third end brought up between the thighs, and so fastened before. This gives time to the effused blood to form into clots at the mouths of the vessels from which the bleeding proceeds. The patient may take from one to two grains of the superacetate of lead, mixed up with a little confection of roses in the form of a pill every four or six hours. Cool air is at the same time to be freely admitted to her chamber, cold acidulated liquors given her for ordinary drink, her body kept perfectly still, and her mind soothed.

If, however, the expulsion of the contents of the womb should take place in a few days after the attack, in defiance of our best endeavours to prevent it, the plan before directed, must be discontinued, and the patient managed in the same manner as subsequent to child-birth.

Having pointed out the means for checking or stopping an abortion, and the method of proceeding when it cannot be avoided, it appears advisable to notice those steps which should be taken for preventing miscarriages in those to whom they are rather habitual; for some women do abort at a stated period for several successive pregnancies, and this occurs more usually about the second or third month than at any other stage.

To prevent an abortion in women of a weak relaxed habit, their diet should consist principally of solid food, with a moderate quantity of wine daily; they should avoid drinking much tea and other watery liquors which afford little nourishment, they should go soon to bed and rise early, take regular exercise either on foot or in a carriage every day, and avoid fatigue and every exciting cause, particularly any intercourse with the other sex. To strengthen the system or general habit, a course of the Peruvian bark, with a few drops of diluted sulphuric acid added to each dose, stomachic bitter infusions, and chalybeates (various forms of which are given in the class of Tonics) may be entered upon at the same time.

In a woman of a full plethoric habit who is subject to habitual miscarriages, it may be advisable to draw off some blood from the arm a little before the time at which she has been accustomed to abort. Her body should likewise be kept open with some gentle laxative medicine, all severe exercise and violent efforts be carefully avoided, her mind free from any emotion, and all disgusting

objects be withheld from her. Her diet should consist principally of vegetables, avoiding strong liquors, and every thing that may tend to heat the body or increase the quantity of blood. Every day she ought to use moderate exercise, taking care at the same time to avoid what excites fatigue.

OF CONVULSIONS.

Convulsions seldom occur in pregnant women before the sixth month, but do frequently occur between this period and the completion of labour.

Symptoms.—They bear a strong resemblance to epileptic fits. The patient is suddenly deprived of sensation, falls down and stretches herself out, the muscles are then thrown into violent action, she foams at the mouth, gnashes her teeth, the face is distorted, the eyes are prominent, and the skin of a dark or purple colour, proving that the circulation through the lungs is not free. After the fit is over, she continues for some time in a heavy or drowsy state, and there is a degree of snorting when she breathes, similar to what takes place in apoplexy. At length she acquires the powers of voluntary motion and sensation, and gradually comes to herself as it is termed, not being conscious however of what has happened. After an interval of uncertain duration, a fresh attack takes place, for it rarely happens that there is not a repetition of the fit.

Causes.—This species of convulsion seems to arise from the enlarged size of the womb or irritation therein, and has been observed to take place oftener during the first pregnancy than in any after one. Occasionally, great exhaustion from a tedious labour, excessive fatigue, or profuse hemorrhage may occasion an attack of convulsive fits.

Convulsions arising at an advanced stage of pregnancy, or during labour, are always to be considered as highly dangerous.

Treatment.—It may sometimes be in our power to prevent an attack of such convulsions by attending to the preceding symptoms. In a woman far advanced in pregnancy, who is strongly disposed to an attack of this complaint from an overfulness of the vessels of the brain, there will be drowsiness, pain in the head, and giddiness, imperfect vision, atoms floating before the eyes, and a sensation of weight when she stoops forward. Under such circumstances, eight or twelve ounces of blood ought promptly to be drawn from the arm, and if no alleviation of the symptoms is procured by the operation, it must be repeated within twenty-four or forty-eight hours, to the same or a greater extent. Immediately after the first bleeding, the bowels should be opened by some gentle purgative (See this Class, P. 4,) repeating it every third morning as long as any sense of giddiness, drowsiness, or fulness in the vessels of the head is perceived.

In a woman where the convulsions are likely to come on from an

irritable state of the nervous system, all exciting causes, as emotions of the mind, &c. ought carefully to be avoided, the body be kept gently open, and medicines such as camphor, æther, and small doses of opium, be given from time to time (See the Class of Antispasmodics, P. 3, 4, and 5.) If the head appears to be affected, a few leeches may probably be applied to the temples with advantage.

Where convulsions have taken place during pregnancy or labour, either from a neglect of these precautionary means or their not being resorted to in due time and with sufficient energy, it will be necessary in women of a full habit, to demand the immediate assistance of a surgeon, that he may draw off from the arm or temporal artery, from sixteen to twenty ounces of blood without delay which operation ought to be repeated within twenty-four hours, if the convulsions do not greatly abate in their violence, or wholly subside within this period, or the mouth of the womb is not so dilated as to admit of the delivery of the woman.

After the bleeding, a blister should be applied immediately to the neck, or between the shoulders, the hair of the head be shaved, and linen cloths wetted with vinegar and cold water laid on pretty generally over it. The bowels should then be made to act freely and as quickly as possible, not only by injecting an active clyster, (See the Class of Purgatives, P. 5 or 6) but by giving, as soon as the woman becomes capable of swallowing, some smart aperient medicine. (See the Class of Laxatives, P. 3 or 11.)

Where convulsions are dependant upon irritation, and arise in women of a delicate habit, and which is highly excitable, a few ounces of blood may be drawn either from the arm or the temples by means of leeches, after which, an anodyne clyster, consisting of half a drachm of assafœtida, dissolved in eleven ounces of thin gruel, with half an ounce of the oil of turpentine, and from eighty to one hundred drops of the tincture of opium, should be immediately administered. Soon after this, some gentle purgative may be given by the mouth to evacuate the contents of the bowels.

The use of a warm bath has been recommended by some physicians in the convulsive attacks of pregnancy and child-birth: where this cannot be readily procured, bottles filled with warm water may be applied to the soles of the feet, and flannels wrung out in hot water over the whole of the belly.

In all cases of convulsion at an advanced stage of pregnancy or during labour, after having endeavoured to mitigate the symptoms, the woman should be delivered as expeditiously as possible, where it is practicable, without force or violence. If the mouth of the womb is any way opened or distended, the midwife or accoucheur should introduce the hand in a gradual manner, finger by finger, assist the dilatation, and bring the infant into the world. Should the convulsions continue after the birth of the child and the coming away of the after-burden, all that can be done is to keep

the brain unloaded by topical bleedings, the bowels open by laxative medicines, and the irritability of the system counteracted by camphor, æther, or musk, combined with opium. (See the Class of Antispasmodics, P. 3 and 4.) A large blister may also be applied to the head, and small ones to the inside of each leg.

OF DELIVERY, OR CHILD-BIRTH.

Women are commonly delivered about the end of the ninth month, or very early in the tenth, and this is the usual and legitimate extent of pregnancy. The general period is forty weeks, or two hundred and eighty days.

In addition to those pains which more decisively mark the approach of real labour, others are apt to come on, which, although they very much resemble labour pains, are not so in reality, and ought therefore to be distinguished. Pains of this sort are known from those of true labour by their being of a flatulent nature, running sometimes across the belly in a transverse direction, and at others upwards towards the chest. These false pains are commonly the effect of costiveness, indigestion, or a diarrhæa. Where the mouth of the womb continues closed, notwithstanding these pains, it may be concluded that they are spurious, and of no avail towards the delivery of the woman.

Symptoms.—Approaching labour is attended with the following symptoms, and the process of it seems to be nearly as follows: The contents of the belly sink low for some days before labour commences, soon after which slight pains are at first perceived, returning at considerable intervals of time; in consequence of these, the womb begins to contract, and a mucous matter, at first colourless and white, and afterwards tinged and mixed with blood, is discharged from the private parts. After a time, the pains return quicker, continue longer, and are more acute; the pulse is considerably affected, the skin becomes hotter, the face reddens, and an agitation of the whole frame of the woman follows. All the symptoms become increased, the mucus or bloody fluid which is discharged is more abundant, the mouth of the womb becomes more distended, and its edges thin; the membranes containing the waters in which the child floats protrude in the form of a cone, and these assist not only in dilating the mouth of the womb, but when they break, in lubricating the passage.

During actual labour, nothing of a heating nature ought to be given; the woman may now and then take a little water gruel, thin panado, or weak animal broth; and her drink ought also to be free from spirits, cordial waters, or wine, which things are too frequently given by nurses with the view of supporting the strength and promoting the labour, but for the most part tend only to increase the febrile disposition, and endanger the life of the woman afterwards, by occasioning severe hemorrhages, and disposing her to miliary and other fevers. If, however, the wo-

man seems to be much exhausted by the labour being long protracted, a little warm wine and water, or some other cordial, may be given; but otherwise, these should be omitted. If the bowels are costive during labour, an aperient clyster ought to be administered; or should the bladder be overcharged with urine, it ought to be emptied by a catheter.

Towards the conclusion of the labour, the pains succeed each other more rapidly and with greater force, beginning first in the small of the back and terminating about the external parts of generation; but occasionally they begin about the region of the navel, and die away towards the fundament, where they commonly leave a sense of weight. At length the waters are evacuated by the bursting of the membranes, but there is usually a considerable interval before the delivery is effected.

The child's head having passed the mouth of the womb, is at length forced forwards, and the body is readily expelled, followed by the rest of the fluid which surrounded the infant, mixed with a portion of blood. Sometimes after the expulsion of the child fresh pains ensue, and by these the exclusion of the after-birth is effected in due time.

When the child is separated from the navel string, and the after-birth has come away, the parts of generation should be covered with a warm cloth, consisting of several folds. The mother is to be laid in bed dry, covered moderately with clothes, and kept perfectly quiet, having first given her a basonful of comfortable warm caudle. Should the after-pains be severe and long continued, a composing draught, consisting of thirty or forty drops of the tincture of opium in one ounce of camphor mixture, and half an ounce of cinnamon water, may be administered some hours afterwards.

The food of the woman after being delivered should be light and thin, as gruel, panado, &c., and her drink be weak and diluting, particularly for the first four or five days, lest febrile symptoms should arise.

OF THE MILK FEVER.

From the secretion of milk which takes place in the breasts of a woman about the third or fourth day after delivery, they are apt to become painful and enlarged, particularly where it is abundant, and a small fever comes on, accompanied by restlessness, thirst, heat of the skin, and pains in the head and back.

By applying the child to the breast a day or two after the mother has been delivered, many unpleasant occurrences may be prevented, particularly if at the same time her body is kept open with some gentle laxative medicine, and her diet is light and cooling. Should any considerable degree of fever arise notwithstanding these precautions, small and frequently repeated doses of the saline mixture, combined with the nitrate of potash and antimony

(See the Class of Antiphlogistics, P. 4,) may be given. She is at the same time to be kept as quiet and undisturbed as possible, and to avoid all drinks containing any kind of wine or spirit. Toast and water, thin gruel, or barley water, will best answer to assuage thirst.

Where any thing occurs to prevent the child from being applied to the breasts, and the secretion of milk is going on, the woman must take care to have them drawn two or three times a day by some healthy and proper person, who is accustomed to this operation.

OF THE LOCHIAL DISCHARGE.

In all women there is a discharge of a bloody fluid for some days after delivery; but this in due time, puts on a mucous appearance, and gradually stops altogether. It sometimes happens, and particularly in women of a relaxed habit, that instead of a moderate discharge of blood, it gushes out with violence, and is so profuse as to run quickly through the bed, in which case the woman soon becomes exhausted and faints. To restrain the hemorrhage, the means advised under the head of Abortions accompanied by floodings, must be had recourse to.

Sometimes it happens that the lochial discharge becomes suppressed long before it ought: in this case, it should be promoted, if possible, by applying warm fomentations to the external parts, and by giving the woman diluting liquors freely. If it is not reproduced in due time, care must be taken to keep the bowels properly open.

OF INFLAMMATION IN THE BREASTS.

Occurrences of this nature are very apt to arise after delivery, from neglecting to put the infant promptly to the breasts, or not having them drawn by some other person; and where proper means are not speedily adopted, the inflammatory tumour proceeds on to suppuration, and forms what is known under the appellation of a broken breast.

The first stage of the complaint is marked by a hard tumour or swelling in some part of the breast, having darting pains extending through it, and accompanied by a slight degree of fever, thirst, and general restlessness. The skin over the part affected becomes of a red and fiery appearance, and at length the inflammation terminates in the formation of purulent matter, and a small abscess.

In the early stage of the complaint, the application of six or eight leeches over the inflamed part, one or two doses of some evapurgative medicine, and keeping linen cloths wetted in some evaporating lotion, (See the Class of Discutients, P. 1 and 2,) are the best means that can be adopted to procure a discussion of the swelling and inflammation, a point highly desirable, as great dis-

tress and inconvenience are always experienced by the woman when she has a broken breast. In addition to the above means, the breasts, particularly the one affected, should be drawn either by the child or some person who is accustomed to the process. Where the nipple is so much retracted, as not to admit of its being laid hold of sufficiently to effect the desired intention, the proper glasses made for that purpose must be substituted.

Should the endeavours to prevent a suppuration fail, and matter form in the tumour, the safest application is a poultice of bread and milk, with an addition of a little sweet oil or lard. This should be renewed morning and evening, until the tumour either breaks of itself, or is soft enough to be opened by a lancet. Afterwards the poultice may be continued for a day or two, and the wound then be dressed with a little dry lint, having a pledget spread with resin cerate laid over all.

OF FRETTED OR CHAPPED NIPPLES.

In occurrences of this nature the parts may be washed morning and night, with a little alum dissolved in rose water, after which they should be dressed with fine lint spread with the following. Take of honey, three drachms, sub-borate of soda, one scruple, and a little prepared chalk, so as to give the whole some degree of consistence. Should this be found not to agree, spermaceti ointment may be substituted.

OF MILIARY ERUPTIONS.

It not unfrequently happens that miliary eruptions, accompanied by some degree of fever, present themselves a few days after a woman has been delivered, and they are usually observed chiefly about the chest and neck, although they are now and then met with over every part of the body. They are occasioned in most instances by a heating stimulant diet, and by keeping the woman very warm, either by too many bed-clothes, or by heating her bed-chamber improperly by a large fire.

The disease is to be treated in the manner advised for miliary fever. If the eruptions recede suddenly, and the pulse becomes very weak and languid, wine and cordial medicines, which determine powerfully to the surface of the body (See the Class of Sudorifics, P. 1 and 6) will be proper, as likewise the application of a blister to the back, and small ones to the inside of the legs.

It will be easy, however, to prevent the appearance of miliary eruptions in lying-in women, by covering their bed lightly with clothes ; by keeping their chamber of a moderate temperature ; by the admission now and then of pure cool air ; by an attention to diet, and avoiding very warm and stimulant drinks ; and by not suffering the bowels to be confined, but procuring one or two motions every day.

OF INFLAMMATION OF THE PERITONEAL MEMBRANE.

This disease sometimes takes place after delivery, and is to be treated in the same manner as has been pointed out in an inflammatory state of this membrane arising from other causes than labour. See page 247.

OF INFLAMMATION OF THE WOMB.

Besides the common causes productive of inflammation, this disease sometimes takes place after delivery, particularly where the labour has been long protracted, instruments have been used, or the lochial discharge which ought to have taken place has been suddenly stopped by an exposure to cold.

Symptoms.—It is accompanied by pains in the lower region of the belly, which are greatly aggravated upon pressure with the hand, as also by tension or tightness of the surrounding parts, considerable depression of strength, a change of countenance, increased heat of the whole body, great thirst, nausea, and vomiting. The pulse is weak, but hard and frequent; the bowels confined, the urine high-coloured and scanty, the secretion of milk somewhat interrupted, and the lochial discharge much diminished if not wholly suppressed.

Inflammation of the womb is always attended with danger, particularly if the symptoms run high and proper means to arrest its progress are not promptly adopted; for in such cases it is apt to terminate either in suppuration, scirrhosity, or a mortification.

Treatment and Regimen.—This, like other inflammatory diseases, is only to be subdued by quickly drawing a quantity of blood from the arm proportionable to the violence of the pain, febrile heat, &c. as well as the habit of the patient; and in repeating the operation we are to be guided by the same circumstances and the effect produced by the previous depletion. In feeble and delicate constitutions, if the inflammatory symptoms are not very considerably reduced by the first bleeding, it may perhaps be more advisable to apply about a dozen leeches to the lower part of the belly than to repeat the former operation.

To relieve the tension and pain in the organ affected, flannel cloths wrung out in hot water, or a decoction of marsh-mallows and poppy heads, (see the Class of Emollients, P. 2 or 4,) should be kept constantly applied over its region, and twice or thrice a day an aperient clyster may be administered. See the Class of Laxatives, P. 16. By this means the bowels will not only be cleared of feculent matter, but the remedy act as an internal fomentation. Should the clysters not prove sufficiently active, their effect must be assisted by some mild purgative.

The next step to be adopted should be to endeavour to excite a gentle perspiration by diluting liquors taken plentifully, together

with five or six grains of the compound powder of ipecacuanha, repeating the dose every four or five hours ; or about one grain and a half of antimonial powder made into a pill with a little confection of roses.

If the inflammation extends to the bladder, and produces a suppression of urine, the assistance of a surgeon will be required to draw it off by means of a catheter. As the application of a blister over the belly might be likely to increase the irritation of the system, as well as occasion some difficulty of making water, it will be best to refrain from employing this remedy.

After the inflammation in the womb has been in a great measure subdued by the means which have been pointed out, some gentle opiate (see the Class of Anodynes, P. 6 or 9,) may be safely given, to alleviate pain and procure rest, if required.

The woman is to be confined to her bed, lying chiefly on her back, as being the easiest position for her. She should drink freely of barley water and such other mucilaginous diluting liquors, and her strength be supported with food of a light and easily digestible nature, such as broths, beef-tea, sago, arrow root, panado, roasted apples, &c. carefully abstaining from all fermented liquors. On recovering, she must carefully guard against any exposure to cold and other causes likely to produce a return of the disease.

OF THE PUERPERAL OR MALIGNANT CHILD-BED FEVER.

This disease is peculiar to women after delivery, and seems to be nearly connected with inflammation of the peritoneal membrane, accompanied in its progress by a fever of the typhous and malignant kind. At its commencement, it puts on inflammatory appearance, but soon becomes of a typhoid nature. It is the most fatal disorder consequent upon delivery, and is supposed to occasion the death of nearly one half of the women who die in child-bed. Sometimes it prevails epidemically, and in such cases the symptoms are generally more urgent.

It is my opinion that the disease may be considered as of two species, viz. the synochal puerperal fever, and the epidemic or contagious puerperal fever. The first to be regarded as purely inflammatory, and resulting from exposure to cold, or some other accidental cause wholly unconnected with contagion: the second arising from infection conveyed some how or other. This view of the disease may possibly reconcile the difference of opinion that exists among medical men with regard to the nature of puerperal fever.

Symptoms.—This fever usually makes its attack about the third or fourth day after delivery, but it has been known not to manifest itself until the sixth or seventh. Like most other fevers, it comes on with a coldness and shivering, soon succeeded by restlessness, pains in the head, flushings in the face, sickness at the stomach, and bilious vomiting. The skin is dry and hot, the pulse quick but

rather feeble, beating from 110 to 130 strokes in a minute; there is considerable thirst, great anxiety with apparent depression of strength, wildness of the eyes, carelessness about the infant, and a disinclination to suckle it.

As the disease advances in its progress, the whole region of the belly is affected; it becomes tumid or swelled, and is highly painful when pressed upon with the hand; the breathing is short and laborious, and there are now severe pains in the back, hips, and region of the womb; the urine is high-coloured, scanty, and voided with some difficulty and heat. The lochial discharge is altered both in appearance and quantity; and if the milk has been previously secreted in the breasts, it suddenly disappears on the attack of the disease; but if the fever has come on prior to the secretion of milk in them, it does not afterwards appear.

When the fever has continued for about 48 hours, it then acquires a typhous and malignant tendency, the inflammatory symptoms having then subsided. The tongue, teeth, and lips are now coated with a dark brown fur, small ulcerations resembling those in the thrush are occasionally to be observed in the interior of the mouth, the breath is very offensive, the stools are of a dark colour, very fetid, and are passed involuntarily, and in a few instances purple spots make their appearance over different parts of the body. At length, life is destroyed.

Causes.—A stoppage of the lochial discharge, an undue secretion of milk, acrimony and redundancy of bile, an absorption of putrid matter from the womb, exposure to cold, and keeping the woman too hot, have been assigned as causes which may give rise to the puerperal fever. Its real cause is however obscure, and has not yet been satisfactorily ascertained. Was I called upon to give my opinion, I should say that it is, in most cases, the consequence of contagion; but that the contagious matter of the disease is only capable of producing its effects in consequence of a peculiar predisposition given by the delivery of the woman and what naturally follows. The same doctrine was taught by the late Dr. Young, who was professor of midwifery in the Edinburgh University when I was a student there.

Inflammation of the peritoneal membrane is the disorder which bears the strongest resemblance to this species of fever; but there is this difference between them, that the former never prevails epidemically or arises from contagion, whereas the latter does. In the former, the fever is of an inflammatory nature throughout its whole course; whereas in the latter, it assumes the typhous and malignant tendency after a duration of eight and forty hours, or probably sooner.

Puerperal fever is always to be considered as a disease attended with imminent danger. Extensive swelling of the belly, sudden cessation of pain, a clammy moisture diffused over the whole body, coldness in the extremities, irregularity in the pulse, and a perfect indifference to all external objects, indicate the certain destruction

of the woman. The pulse becoming slower, the skin moist, the tension and soreness of the belly gradually subsiding after stools of a more healthy appearance, and the lochial discharge again taking place, may be considered as favourable circumstances.

Treatment and Regimen.—It has already been mentioned that puerperal fever usually puts on an inflammatory appearance during its first stage, (that is, for the first 36 or 48 hours) and therefore when the woman complains of great abdominal pains and soreness within this period, blood should be drawn from the arm in a quantity proportioned to the severity of the symptoms and the habit of body. Twelve or sixteen ounces may be sufficient in ordinary cases; but in women of a robust and full habit, the bleeding may be extended to the amount of twenty ounces. Should the pain and soreness in the belly not be considerably relieved by the bleeding within six or eight hours, the operation ought to be repeated, and ten or twelve ounces more of blood be taken away. When the disease has entered into its second stage, and is marked by typhous symptoms, bleeding must not be resorted to; neither should it be adopted at all where extreme debility, depression of strength, a small feeble pulse, and such like symptoms are apparent at the commencement of the fever.

The woman after being bled (where nothing has occurred to prevent the operation) should then take some mild aperient medicine to remove and carry off all feculent and putrid matter lodged in the intestinal tube. A pill, consisting of three grains of the submuriate of mercury and two of jalap, formed of a proper consistence with a little common syrup, may be taken immediately, followed an hour afterwards by a solution of the sulphate of magnesia in an infusion of senna, in the proportion of three drachms of the former to one ounce and a half of the latter. Should these remedies not procure a sufficient number of stools within four or five hours, an aperient clyster (See the Class of Laxatives, P. 16) should be administered.

These steps being taken, the application of flannel cloths wrung out in warm water or a decoction of bruised poppy heads and chamomile flowers, may be recommended, taking care to re-wet them from time to time when they become cool or dry. If the pain and soreness at the bottom of the belly are not relieved by the fomentations, it will be advisable to apply a blister to the upper part of each thigh, this being preferable to placing it on the belly, as we should thereby be deprived of the benefit arising from a use of fomentations.

It is to be understood that three or four motions ought to be procured each day by a repetition of the aperient medicines and clysters, when the bowels do not act to that extent spontaneously. After the feculent and putrescent matters contained therein have been freely evacuated, an opiate (see the Class of Anodynes, P. 5,) may be given at bed-time.

Sometimes nausea and vomiting attend on an attack of puerpe-

ral fever, in which case a gentle emetic of ipecacuanha may be given at an early period of the disease; but should these come on at a more advanced stage, and prove distressing, they ought to be restrained by giving two or three table-spoonsful of the saline mixture in the act of effervescence, adding to each dose ten or twelve drops of the tincture of opium. The region of the stomach may at the same time be rubbed frequently with an anodyne liniment consisting of equal parts of camphor liniment and the tincture of opium.

If a purging arises, and the stools are so frequent as greatly to weaken and exhaust the patient, some medicine (see the Class of Astringents, P. 5, 6, or 8,) should be given by the mouth to check it; and if this does not answer alone, a clyster of a thin solution of starch, with thirty-five or forty drops of tincture of opium, may be administered, repeating it as the occasion shall seem to require.

It has already been mentioned that puerperal fever, after continuing for some time, frequently acquires a putrid and malignant form. In such cases the Peruvian bark, conjoined either with a few drops of the diluted muriatic or sulphuric acid, and some cordial (see the Class of Antiseptics, P. 6 or 7,) must be given every two or three hours. If the patient's stomach will bear the bark in powder, and it does not excite purging, it should be preferred to either the decoction or infusion, and may be given in doses of half a drachm, mixed in Port wine diluted with a little water, adding ten or twelve drops of either of the acids just mentioned. Where none of the preparations of the bark can be administered on account of the disturbed or irritable state of the bowels, and which it certainly has a tendency to increase, we must be content to substitute an infusion of cascarilla, (see the Class of Tonics, P. 4,) with the dose of either of the acids before specified, adding thereto about one drachm and a half of the compound tincture of cinnamon.

At the commencement of the disease the patient's food ought to be light, and the drink diluting; but at a more advanced stage, or where the strength has been much reduced by evacuations either produced by medicine, or which have arisen spontaneously, it will be necessary to support her with a nourishing diet, and wine in a state of dilution.

With this view of avoiding this fever and preventing its occurring, every woman, during the time of labour, as well as after it is completed, should be kept perfectly quiet; her food ought to be simple and light, her chamber cool and properly ventilated, and the strictest attention be paid to cleanliness, both as to her person and bed-linen. She is most carefully to avoid any kind of exposure to cold, and she should not rise from her bed too soon after delivery. On the secretion of milk taking place the child should be applied to the breasts, and in case of any accident to it, they ought to be drawn three or four times a day by some other person. If her bowels are confined, some gentle laxative medicine should be taken to remove the costiveness, and one if not two stools be procured daily.

In situations where this fever is prevalent, all communication should be cut off between those who have just been delivered or expect very soon to be so, and those who are or have been affected by it. To destroy its contagion wholly, fumigations with the mineral acids, as mentioned in page 65, should be adopted ; after which the apartments wherein the sick were lodged ought to be well ventilated, and then whitewashed and painted. This process will be particularly requisite in houses fitted up for the reception of lying-in women.

In some cases the contagion has been known to have been communicated either by the nurse or accoucheur having lately attended a woman who has laboured under this or typhus fever. It is therefore incumbent on such persons carefully to guard against the chances of conveying infection to lying-in women, by a careful ablution of their hands, and a total change of their clothes previous to their going near such women.

OF THE SWELLED LEG INCIDENT TO LYING-IN WOMEN.

This disease is not of very frequent occurrence, but it is occasionally met with in women a few days after delivery, and is evidently of an inflammatory nature, not only affecting the limb, but also the whole system in some degree. Some cases do occur in which the complaint is not confined to only one of the lower extremities, but occupies both of them ; and it sometimes happens that after it has subsided in one limb, the other has been attacked in a similar way.

Symptoms.—The disease is marked by a firm, glossy, elastic, and painful swelling, of a white or pale colour, which pretty suddenly seizes the leg, foot, and thigh of a woman some days after her delivery of a child, and from thence extends upwards to the external parts of generation, groin of the side affected, and loins. The attack is generally preceded by a sense of coldness over the whole body, with shiverings, which are succeeded by febrile heat, thirst, and an acceleration of the pulse. At first the patient experiences a stiffness, weight, and pain in the limb, which are much increased upon her making any attempt to move it or the lower portion of the body. After a time, the extremity becomes very tender to the touch, but shows no discolouration ; it is, however, hotter than what is natural, and feels much fuller than usual. When pressed upon with the fingers, very little indentation takes place, and what does occur, is soon effaced. If a puncture is made into the limb, no fluid in general is discharged, but should any escape, it does not coagulate.

In the course of some days (say from six to twelve) the febrile symptoms diminish, and the swelling, heat, tension, and tenderness of the affected limb begin to abate, first in the upper part of the thigh, and afterwards in the leg and foot. The febrile symptoms having gone off, the patient experiences considerable debility,

and the extremity feels stiff, benumbed, heavy, and weak. It seldom returns to its original size, but on the contrary remains enlarged throughout life.

Causes.—The disease is occasioned by tedious and difficult labours, exposure to cold by getting out of bed too soon, the suppression of natural secretions, particularly the lochial discharge and flowing of the milk, or by improper treatment of the woman after delivery. Some physicians have assigned an obstruction or rupture of the lymphatic vessels of the part as a cause of the complaint.

It seldom terminates fatally, and but very rarely is followed by any suppuration in the parts affected.

Treatment and Regimen.—Due regard must be paid to the stage in which the disease exists. During its first or inflammatory stage, if the febrile symptoms run high, a few ounces of blood should be drawn from the arm, and several leeches be applied to the limbs, if likewise judged necessary; after which, the bowels must be well opened by some gentle cathartic, (See the Class of Laxatives, P. 11 or 12) and then the circulation be determined to the surface of the body, and a gentle moisture of the skin promoted, by frequently administering small doses of tartarized antimony dissolved in the saline mixture, or combined with a solution of the acetate of ammonia. See the Class of Diaphoretics, P. 6 and 7.

The limb may at the same time be well fomented with flannel cloths wrung out in a warm decoction of bruised poppy heads, or, from the want of these, in tepid water to which a little vinegar has been added. It may sometimes be requisite to apply a blister about the calf of the leg, with the view of drawing off some of the effused fluid; which application may be renewed from time to time in the neighbourhood of the first. Neither punctures nor scarifications will produce any good effect.

In the second stage of the disease, where the febrile and inflammatory symptoms have gone off, some benefit may possibly be derived by giving small doses of squill combined with the sub-muriate of mercury, or some tonic, such as an infusion of cascarilla, calumbo, or gentian, (See the Class of Tonics, P. 4, 5, and 6) at the same time rubbing the limb every night and morning with any stimulating liniment, (See the Class of Stimulants, P. 7, 8, or 9) and then applying a flannel roller round it, beginning at the foot and so ascending gradually.

During the first or inflammatory stage of the disease the patient must be restricted to a cooling and low diet; but in the last, more effective nourishment should be allowed her, together with a use of wine, proportioning both to the existing degree of debility.

FALLING OR PROJECTION OF THE WOMB.

This complaint is frequently met with among women who have had many children or frequent miscarriages, particularly those of a delicate constitution, and with lax fibres. Sometimes it is occa-

sioned by rising too soon out of bed after delivery, and before the parts have regained their usual tone or strength. In single women, it now and then takes place from lifting some heavy weight, jumping, dancing, or the like violent exertion during or soon after menstruation, and occasionally it has arisen as a consequence of the whites long continued.

The disease is usually accompanied by a sense of bearing down, as also pains in the back, groins, and private parts, which unpleasant symptoms are relieved by a horizontal position. In some cases the womb only falls lower than it ought to do, but in others it protrudes beyond the external parts. Before the tumour appears outwardly, there is sometimes a considerable discharge of a mucous fluid, but this is generally lessened when the protrusion takes place.

A falling of the womb, although a local disease, is often productive of distressing symptoms which injure the woman's general health; and these arise from the functions of the stomach and bowels being impaired, and the nervous system somewhat affected.

Treatment.—In slight cases of this complaint, confining the woman a good deal to a recumbent posture upon a sofa or hair mattress, instructing her to make use of a bidet filled with cold water, and by means of a large sponge, well wetting the back, bottom of the belly, and parts more immediately concerned, and then injecting a little of the fluid up the vagina by means of a syringe, will sometimes be sufficient, particularly if assisted by a nutritive diet and medicines of a strengthening nature, such as the bark, preparations of iron, bitter infusions, and the mineral acids, various forms of which are given under the Class of Tonics, and to which I beg leave to refer the reader. Costiveness must at the same time be guarded against by taking, if necessary, some gentle laxative, observing however not to excite the bowels to over-action, as this would be injurious.

In cases of long standing, and which resist the simple ablution and injecting with cold water, or where there is a considerable discharge of mucous or other matter, it then will be necessary to substitute some more powerful injection, such as a solution of alum, or the sulphate of zinc in an infusion of roses, or a decoction of oak bark. See the Class of Astringents, P. 17, 19, 20, or 21. The use of a cold bath may also be employed.

Where the womb protrudes, it ought to be replaced by laying the woman on her back, applying the fingers and thumb to the lower part of the tumour, and then by a gradual and gentle pressure carried upwards into its centre and continued, the parts are to be returned to their natural place. This being effected, a proper sized pessary is to be introduced, and the woman kept in a recumbent posture for several hours. The pessary ought to be introduced as high up the vagina as can be borne easily, and it must occasionally be removed, and well cleansed. As the parts recover their proper strength and tone, one somewhat of a smaller size should be substituted.

A woman afflicted with this complaint, and who becomes pregnant, will not require the use of a pessary after the third month, and by being very cautious after her delivery may, perhaps, be able to prevent any return of the disorder. Let her not therefore be in too great a hurry to quit her bed; and when sufficiently recovered so to do, she should avoid as much as possible for some time an erect position, and all active exercise or much exertion.

ATROPHY FROM SUCKLING.

Some women of a delicate constitution cannot suckle long without an evident appearance of declining health, and if persisted in it might terminate in a general wasting of the body and loss of strength, or some morbid affection of the lungs. When, therefore, a woman finds her health declining, and that she gets weaker every day, with loss of appetite and languor, she ought immediately to leave off suckling; she should use a very generous diet with a moderate quantity of wine daily, and, if convenient, change the air, particularly if an inhabitant of a large and populous city or town. If the change is not found sufficiently efficacious of itself when conjoined with a restorative diet, a course of the Peruvian bark, or other bitter infusions of cascarilla, or calumba, with a few drops of some mineral acid as recommended in the Class of Tonics, may be tried. Gentle exercise on horseback, or in a carriage, will greatly assist the effect of these remedies.

OF SURGERY, CASUALTIES, &c.

In introducing Surgery into this Work, it is only the intention of its author to notice a few of the occurrences or casualties which may demand prompt assistance, and a surgeon not being at hand to give his aid, noticing at the same time a few of the minor operations, such as drawing blood from the arm, or by cupping, as well as by the application of leeches.

OF WOUNDS, AND AN EFFUSION OF BLOOD THEREFROM.

In consequence of the division of an artery, or some considerable branch of it, a very copious discharge of blood frequently takes place from a wound recently inflicted; and this, if not speedily stopped, exposes the life of the person to imminent danger. It flows rapidly and in jerks through the part which has been divided.

In all such cases the object must be to make such a compression on the trunk of the vessel above the wound, as shall stop the further loss of blood, until the assistance of a surgeon can be obtained to include the mouth of the bleeding artery in a ligature passed round it, and for this purpose an instrument called a tourniquet is generally employed. That with a screw to it is the easiest

managed by persons not conversant with surgery ; but where this is not at hand, a strong ligature of broad tape or narrow girthing, such as men's braces are made of, together with a round piece of stick of the length of about eight inches, and a large bottle cork covered over with linen rag, so as to form a pad, will be a good substitute.

That a proper knowledge may be acquired as to the general principles of compressing a bleeding vessel, it may be necessary to mention the course of the principal arteries, and where the tourniquet ought to be applied.

The whole of the body is supplied with blood from the heart through the arteries, which is again carried back to this organ by the veins that communicate with the arteries. In the upper extremity or arm, the trunk of the humeral artery (which is a branch of the aorta proceeding immediately from the left ventricle of the heart) pass into the arm pit, then proceeds along the inward part of the upper extremity obliquely towards the fore part of the joint of the elbow, and here divides into branches. In this course of its division it lies near to the bone, and therefore admits of being here more readily and successfully compressed. The compression for preventing a flow of blood from divided arteries of the upper extremity, whether above the elbow, or of the hand, must therefore be made in some part of the course of the trunk of the artery between the arm pit, and bend of the arm, say midway between them.

The distribution of the vessels of the lower extremity is as follows: The crural artery (as it is called by anatomists) passes from the cavity of the belly to the groin, and its pulsations there may readily be felt in thin people. In cases of a wound or effusion of blood very high up in the thigh, effectual compression may be made here by the fingers, or by the pad of the tourniquet, or any other firm body pressed strongly against the part.

From the groin, the artery proceeds in an oblique direction downwards and inwards, and about the middle of the inside of the thigh it lies pretty close to the bone, which, of course, is the most favourable part for making a pressure on it with the pad or tourniquet, because of the resistance of the thigh bone. Hence, when the wound is in any part below it, this is the place which is chosen by surgeons for the application of the pad of the instrument. The course of the vessel is then downwards and backwards to the ham ; in the hollow of which, against the lower flat part of the thigh bone, the compression may be successfully made in all cases of wounds below the knee joint ; but beyond this part, compression must not be depended upon, for immediately below the joint the artery divides, like that of the upper extremity, into other branches, which are situated between the bones of the leg.

In applying the tourniquet, care must be taken that the pad, which is the part of the instrument meant to make the pressure with, be placed immediately over the artery, and that the stick with which the ligature or bandage is to be twisted with, in the case of not be-

ing furnished with the screw instrument, be as nearly opposite to it as possible. The bandage of broad tape or narrow girthing being applied round the limb somewhat slack, the stick is to be introduced under it, and to be twisted round until the bleeding stops. Care must however be taken not to carry it beyond this point, lest inflammation of the part be induced, which would be likely to terminate in gangrene.

If the wounded artery be in the head, trunk of the body, or other part where the tourniquet cannot be applied, the only method of putting a stop to the bleeding will be by means of dossils of lint, soft linen, or a small bit of sponge well wetted in a saturated solution of alum in water, or an infusion of roses, such as a drachm of the former to an ounce of either of the latter, or some other styptic (see this Class, P. 2, 3, or 5,) and held firmly over the wound, or the divided ends of the vessel, by the fingers.

Where a wound is unattended by much hemorrhage, but is at the same time of an extensive nature, although of no depth, and its lips are greatly receded from each other, these had better be brought in contact, either by means of narrow strips of adhesive plaster, or by ligatures with strong waxed silk and a needle. When a wound penetrates deep, some soft linen may be laid gently into it, and its surface covered with a little of the same spread with resin ointment, secured with a bandage, applied somewhat loose. Many surgeons give a preference to the latter over the former mode of treating incised wounds, as sometimes the object of producing adhesion of the divided lips is apt to be counteracted by the strips of adhesive plaster so entirely covering the wound as not to leave a sufficient drain or outlet for the discharge of the serous fluid or matter which forms during the adhesive process, whereby much injury is produced. It is to be understood that when a person has received a wound, the first thing to be done is to examine whether any foreign body be lodged in it, as wood, glass, lead, iron, bits of cloth, dirt, or the like, and if so, to extract this, and cleanse the wound well previous to any dressing being applied to it.

If a wound is occupied by much tumefaction and swelling, an emollient poultice of bread, milk, and a little lard or sweet oil, may be applied every night and morning for a few days, previously fomenting the part well each time. See the Class of Emollients, P. 2, 4, and 5.

In all extensive wounds it will be advisable to allow the first dressing to remain on for two or three days, so as that some degree of suppuration may have taken place, when it will be removed with greater ease. Should it, however, stick then, the part should be bathed with a sponge dipped in warm water so as to soften the dressing and make it come off the easier. The wound is then to be dressed superficially every morning and night with resin cerate spread on fine lint. If fungous or proud flesh, as it is vulgarly called, rises above its surface in the progress of the cure, it must be checked by touching it occasionally with the sulphate of copper or red precipitate of mercury.

Where wounds are accompanied by much inflammation, the patient's body should be kept open by laxative medicines, (see this Class, P. 3, 11, or 13,) and a cooling vegetable diet be strictly adhered to, perfect quiet and ease being at the same time enjoined. On the other hand, if the patient has been much exhausted by a loss of blood from the wound, or is of a delicate or enfeebled constitution, and suppuration does not go on kindly, he ought to be allowed a generous nutritive diet with a moderate quantity of wine, taking at the same time a drachm of the powder of Peruvian bark three or four times a day.

OF GUN SHOT WOUNDS.

In the management of these kind of wounds we must attend to two points: first, the removal, if possible, of the extraneous irritation or cause; secondly, the mode of treating the wound.

The first is accomplished by extracting with the forceps the bullet, wadding, or whatever substance has been driven into the wound, when it is sufficiently near the surface, or can be got at readily without much hazard of injuring or irritating the surrounding parts; and where the opening is not sufficiently large to admit of the introduction of the forceps, the aperture must be enlarged, taking care at the same time not to divide an artery of any magnitude. If the extraneous substance eludes our search, as will frequently happen, it must be allowed to remain in the part to see if nature will be competent to throw it off in process of time by suppuration. It will, however, be always advisable to use every prudent exertion in endeavouring to extract the foreign substance, as this is always a desirable circumstance, although in some cases no very considerable inconvenience or injury will be experienced during the person's life, where the extraneous substance is lodged in any soft or fleshy parts of the body.

Having succeeded or not in extracting the extraneous substance, our next object should be to guard against the coming on of severe inflammation in the part that might ultimately terminate in gangrene, which gun shot wounds are apt to do. If the loss of blood from the wound has not been considerable, and sufficient to prevent the coming on of an active inflammation, the tone of the system must be lowered by drawing blood from the arm to a proper extent, as well as from the part by means of several leeches. The bowels are at the same time to be freely opened by some gentle purgative, (see this Class, P. 1, 3, or 4); the wound to be covered with a little fine lint, laying an emollient poultice of bread, milk, and a little sweet oil over all. Moreover the patient must be enjoined to keep himself perfectly quiet, and in a recumbent position; to confine himself to a low or spare regimen, and abstain from all fermented and spirituous liquors. With the view of allaying irritation and pain, a tranquillizing draught (See the Class of Anodynes, P. 5 or 7), may be taken twice a day.

As soon as a suppuration takes place, and there is a free discharge of purulent matter from the wound, the patient's strength must be supported by a more generous diet, such as good broths, beef tea, animal food of a light nature, and a moderate quantity of wine. We may at the same time prescribe the Peruvian bark to be taken in drachm doses four or five times a day, conjoined with fifteen or twenty drops of the diluted sulphuric acid. To guard against any hemorrhage of blood from the wound in consequence of sloughing, or any vessel giving way in the process of the suppuration, it will be advisable to have a tourniquet always at hand, that it may be applied on the first appearance of bleeding, till the more permanent means of securing the artery by means of a ligature can be adopted. Care must be taken during the suppurative and incarnating stages of the wound that the matter is not confined, but has a free outlet. If there be any sinus in which this is lodged, it must be laid open with a knife if of no great extent, or the matter may be discharged by passing a seton through it. The limb is to be placed in a dependent position, and the discharge assisted by making a degree of pressure on the part, taking care, at the same time, not to excite pain thereby. Should there be any splinter or other pointed substance in the wound, keeping up irritation, it must be removed.

The cure of most gun shot wounds will eventually be accomplished by a due attention to the means which have been pointed out; but sometimes there is an early disposition in the injured parts to become gangrenous and mortify, or the great laceration which has been occasioned where the wound has occurred in the extremities, renders amputation necessary. With respect to the treatment of gangrene and mortification in such cases, the same must be adopted as arising from other causes; and therefore I beg leave to refer the reader to page 147, where inflammation terminating in these is particularly pointed out.

OF BURNS AND SCALDS.

In trifling occurrences of the like nature where the skin is not much broken, smearing the injured parts with a feather dipped in lime water and linseed oil in equal proportons (say four ounces of each) adding thereto one ounce of the vinous tincture of opium, will be a very proper application, or the parts may be wetted frequently with a solution of the acetate of lead in common water, in the proportion of sixty drops of the former to a pint of the latter, adding thereto one ounce of the spirituous tincture of opium or laudanum. By some it has been recommended to immerse the injured parts immediately in cold water.

If the person who has sustained the injury be of a full habit of body and becomes very feverish, it will be advisable to open the bowels freely by some purgative medicine (See this Class, P. 3 or 4,) and then to give him the saline mixture (See the Class of Anti-

phlogistics, P. 4) every three or four hours, adding, where the pain is very great, six or eight drops of the tincture of opium to each dose. As long as the inflammatory symptoms continue, a spare and low diet must be enjoined.

In burns and scalds of a extensive nature, it has been much the practice of late years to employ stimulating applications, such as the rectified spirit of wine or oil of turpentine made of a tepid heat by means of a linen rag dipped in either of these, so as to wash and bathe the whole of the injured surface. This when done two or three times, is then to be discontinued, and the parts to be well secured from the air, by covering them with soft linen rags spread with a digestive ointment, composed of resin cerate, mixed up with as much oil of turpentine as will give it a due consistence. After about twenty-four hours application of this dressing, it is to be discontinued, and the injured parts dressed with the liniment of linseed oil and lime water as before mentioned, or with calamine cerate. When there is great pain and irritation, an opiate should be given at night. See the Class of Anodynes, P. 1, 3, or 5.

Where the injury is extensive and severe, there may be danger of a mortification ensuing, and therefore in all such cases it will be advisable to call in the aid of a skilful surgeon.

OF BRUISES.

In slight accidents of this nature, it may be sufficient to keep linen cloths wetted in some discutient (See this Class, P. 1, 3, or 6) lotion to the part, or even in a little vinegar made of a tepid heat and mixed with a small quantity of any kind of spirits. But where the accident is of a severe nature, it will be advisable to counteract any tendency to inflammation, by bleeding the patient in the arm, to an extent proportioned to the violence of the injury, his habit of body and age, confining him at the same time to a spare regimen of cooling and vegetable articles of food and diluting liquors, and keeping his bowels open by laxative medicines (See this Class, P. 5, 11, or 13) and clysters.

As an application to the injured parts, a poultice made of linseed or rye meal, well moistened with a solution of the acetate of lead mixed with water (say one drachm of the former to half a pint of the latter), may be laid on cold every morning and night, or be renewed as often as it becomes dry and hard. If the bruise is accompanied by a wound, this should be kept very clean, and be covered with a mild dressing of resin or other cerate spread upon fine lint. When the inflammation does not abate but continues obstinate, several leeches may be applied in the immediate neighbourhood of the diseased part, and the bleeding from the wounds be encouraged; after which, linen rags well wetted in some evaporating lotion (See the Class of Discutients, P. 1, 3, or 6), may be kept constantly applied. The patient's bowels ought, at the same time, to be open and free, and where there is accompanying fever,

the saline mixture conjoined with the nitrate of potash (See the Class of Antiphlogistics, P. 4 or 5) may be taken in doses of two or three table-spoonsful every four hours.

OF SPRAINS.

Slight accidents of this nature seldom require any thing more than rest from such exertions as put the muscular and tendinous parts of the injured limb into motion, and rubbing it two or three times a day with some proper liniment, such as the compound camphor or soap liniment; but in cases of violent sprains accompanied by swelling and inflammation, these must be subdued by the application of several leeches, encouraging the after-discharge of blood from the wounds, by dabbing them frequently with a sponge wrung out in warm water, after which, linen cloths, wetted in the following wash may be kept constantly applied throughout the day, and by night a poultice of linseed or rye meal, as mentioned under the head of Bruises, be laid on. Take of the solution of the acetate of ammonia, two ounces, rectified spirits, one ounce, common water, four ounces, and one drachm of the solution of the acetate of lead. The bowels are at the same time to be kept very open by laxative medicines, and as long as the inflammatory symptoms continue, the patient must be confined to a low regimen.

Where great weakness remains in the injured or sprained part after the swelling and inflammation have gone off, immersing the limb suddenly in cold water morning and night, or pumping upon it, and afterwards rubbing it with the compound camphor or soap liniment, will be likely to prove advantageous. Sprains frequently require a length of time before they are thoroughly removed. In such cases, besides frictions and bathing the part with cold water, it may be advisable to wear a calico or thin flannel bandage applied rather tight round the injured part, avoiding at the same time any considerable exercise.

OF ULCERS.

Ulcers proceed from various causes, such as wounds, bruises, abscesses improperly treated, a bad habit of body, and other diseases, particularly the scurvy, scrofula, and a venereal taint, and they may therefore be considered either as a local affection or a constitutional one. By the former, are to be understood all such as do not depend on any disorder in the system, and may be cured with safety by topical applications; and by the latter are meant those that are connected with some disease in the constitution, and which, in addition to the use of remedies applied immediately to the sore, require a proper attention to be paid to the state of the general habit, and the correction of what is acrimonious or bad in it.

Previous to making any attempt however to heal up an ulcer, it will be of the utmost importance to determine how far such a step may be congenial with the safety and health of the patient. Most likely every recent sore may be healed with perfect propriety; but when an ulcer has been of long standing, or appears to act as a preventive of any other disorder to which the patient has been subject, by carrying off a something injurious from the system, it has always been considered a dangerous practice to heal it up without subsituting some artificial drain in its stead; and indeed when an ulcer has been of long standing and has afforded a copious discharge, its being suddenly dried up, either spontaneously or by applications for that purpose, has frequently been followed by some inveterate acute disease, which has ultimately terminated in the destruction of life.

In all ulcers which have afforded a copious discharge, and which have been of long standing, we should therefore never attempt to heal them up without substituting some artificial drain, by means either of an issue or seton, of a permanent nature.

A recent ulcer arising from a wound or bruise, may readily and quickly be subdued by a strict attention to cleanliness, and easing the limb on which it is seated as much as possible, dressing it with fine lint, and a pledget of the same or linen rag spread with calamine or resin cerate laid over all every morning and night. If fungous or proud flesh rises up, this must be repressed, by sprinkling it occasionally with a little of the red precipitate of mercury; or should the edges of the sore become hard, callous, and rise above the surface considerably, they may be touched at each time of dressing with a little of the sulphate of copper.

In ulcers of longer standing or of a more extensive nature, no method that I am acquainted with for their cure is equal or can be compared to that suggested and practised by the late Mr. Baynton, of Bristol, which is to be admired for its simplicity as much as it has been extolled for its astonishing efficacy. It is on the principle of exciting a cohesion of parts by straps of adhesive plaster, and in the application of the remedies very little else is required. It is performed as follows.

Let strips of the plaster, spread on linen, be cut about the length of the hand, and wide in proportion to the ulcer; let the broad end of each strip be applied on each side of the wound, pressing them down with the fingers; these slips are now to be drawn as tight as the patient can bear without much inconvenience, and the sides of the wound brought as close in contact with each other as possible, and held in that situation till the plasters become warm and stick firmly, when a calico roller is to be applied neatly, from the foot up to the knee. At first, the strips need not be drawn very tight, which, if the wound be tender, would be likely to occasion much pain; but it will generally be found that on every time of applying them the patient will bear to have the tightness increased until it be sufficiently so to effect a cure.

The whole of the parts that are affected should then be well moistened with cold spring water poured from a large tea-pot, and where the discharge is acrid and profuse, or the parts are much inflamed, the wetting should be renewed often, say once in every hour or so. During this mode of treatment the patient is not to be confined, but to take what excercise he pleases.

In conjunction with this topical treatment of an ulcer, such medicines may be taken inwardly as seem best adapted to the case. If it be connected with a venereal taint, mercury may be given along with a decoction of sarsaparilla. See the Class of Alteratives, P. 9, 10, 12, or 13. Should the ulcer be very tender and irritable, opium in small doses, and repeated often, will be likely to prove serviceable.

In all cases of ulcer the diet must be adapted to existing circumstances. If there is considerable debility, a generous and nutritive one will be necessary, but if the discharge is very acrimonious, a diet of vegetables, milk, light animal broths, &c. will be most proper, the patient abstaining from salted and high-seasoned food, and all strong and fermented liquors. The state of the bowels ought at the same time to be carefully attended to, and these kept open by cooling laxative vegetables and medicines. See this Class, P. 6 and 11.

OF RUPTURES.

By a rupture is to be understood a soft compressible swelling either in the groin, scrotum (the bag containing the testicles) or at the navel, in consequence of a portion either of the intestine or caul (omentum) protruding through the lacerated fibres of the muscles or tendons of the parts. Elderly people and children are most liable to such occurrences. In adults, they are produced by some violent or sudden exertion, as by jumping, wrestling, &c. or by lifting heavy weights, carrying burdensome loads, excessive costiveness, &c. In children by much crying, coughing, vomiting, or the like.

On the first appearance of a rupture in a child, it should be placed on its back, with its head low and its hips elevated, and the gut, which has protruded and forms the swelling, be returned by means of a gentle pressure with the fingers, after which a proper bandage or truss must be constantly worn for a considerable length of time. The child should be kept as quiet as possible, and free from any strong exertions till the ruptured fibres of the muscle or tendon have united and closed, or till it outgrows any preternatural dilatation of the part through which the protrusion had taken place.

In adults an attempt must be made to replace the protruded portion of the intestine or caul in its proper situation, and then prevent its slipping out again by obliging the patient to wear a proper truss, as no dependence should be placed on any kind of

bandage. It sometimes happens, however, that great difficulty in returning it is experienced, and now and then it cannot be effected without an operation. In the former instance, where there may be danger of inflammation ensuing, the patient should be bled to the extent of sixteen or twenty ounces, and an emollient laxative clyster be injected, repeating it every three or four hours. To assist these it has been customary among surgeons to foment the parts with flannel cloths wrung out of a warm decoction of chamomile flowers and marsh-mallows; (see the Class of Emollients, P. 2,) but I have generally found that cold applications, such as pounded ice inclosed in a bladder, or linen cloths wetted in some quick evaporating lotion, to answer better; and for this purpose about two ounces of the acetate of ammonia, one ounce and a half of rectified spirit, and five of water, well mixed together, may be employed.

During the use of these means recourse must now and then be had to gentle pressure with the palms of the hand and fingers, with the view of conducting the protruded substance through the same aperture by which it came out. If this also proves ineffectual, a clyster of an infusion of tobacco may be injected, this being preferable to the smoke, to administer which requires a particular apparatus. The infusion is made by macerating one drachm of the leaves of tobacco in one pint of water for about an hour, and then pouring off the liquor for use. This remedy acts by producing a considerable degree of faintness, during which any spasmodic constriction in the part through which the gut or caul has protruded, is removed; but the injection should be repeated with great caution, as it is apt to produce terrific effects by greatly depressing the powers of life.

Should we be foiled in all our attempts to reduce the protruded parts, and the patient experience much pain in the tumour, attended with restlessness, fever, vomiting, and obstinate costiveness, no time should be lost in submitting to the necessary operation for releasing the strangulated portion of the gut, otherwise it may soon become gangrenous, and life in all probability be destroyed.

If we should, however, succeed in reducing the protruded parts without the necessity of an operation, the patient should ever afterwards wear a proper truss, at all times carefully avoiding any kind of severe exercise, or violent exertion, abstaining from food of a flatulent nature, and guarding against any exposure to cold or a constipated state of the bowels.

OF SUBSTANCES LODGED BETWEEN THE MOUTH AND STOMACH.

In all occurrences of this nature we must attempt to dislodge the obstructing matter, either by extracting it or pushing it down. When seated at the top of the gullet, it may sometimes be removed by the fingers or a pair of crooked forceps; but when it has

descended beyond the reach of them, it will be necessary to push it down into the stomach by means of what is known to medical men under the name of a probang, which instrument is formed of a long piece of whalebone of about the thickness of a large quill, with a round piece of sponge well secured to the end of it. As little force as possible should be employed in making use of it, particularly when the obstructing substance is sharp pointed or has acute angles, as in cases of needles, pins, or sharp pieces of bone, or glass.

When the substance has been dislodged from the gullet and has passed into the stomach, no means should be employed to hasten its course through the alimentary canal; for if it is sharp pointed it will be less likely to injure the coats of the intestines by passing gently with hardened feculent matter, than by being accelerated through them in liquid stools procured by purgatives. If any aperient medicine is given, a gentle dose of castor oil will be the most innocent. Emetics had best be avoided.

Should the substance swallowed be of a metallic nature, such as copper, lead, &c. no acid of any kind ought to be used until after it has been voided by stool; and for the purpose of correcting the natural acidity in the stomach, the patient may take a little magnesia, or a few grains of the subcarbonate of potash, once or twice a day.

Where we are foiled in our attempts to get rid of the obstructing substance in the gullet, and we are under the necessity of leaving it in the parts, the tendency to inflammation must be obviated by bleeding the patient, by applying emollient poultices and fomentations round the neck, and by confining him to a spare regimen, consisting of liquid articles. If he is incapable of swallowing even these, his strength must be supported by nourishing clysters of strong animal broths, repeated three or four times a day, but in a moderate quantity at a time, that they may be retained the more readily.

Where life becomes exposed to imminent danger, the assistance of a surgeon is indispensably necessary for the purpose of making an incision into the gullet, and extracting the obstructing substance.

If any extraneous body gets into the windpipe and endangers suffocation, the operation of laryngotomy, or making an opening therein, must promptly be performed.

OF VENESECTION OR BLEEDING.

The different diseases in which the drawing off blood from the arm is required to moderate an increased action of the heart and arteries, and subdue a tendency to inflammation, have been fully pointed out in the preceding pages of this work; I shall here therefore give only the outline of the mode of performing the operation where it becomes absolutely necessary to be done without

delay, as in cases of sudden seizures of apoplexy, highly inflammatory complaints, and sudden accidents, and where the assistance of a surgeon cannot be quickly obtained. It will however be necessary that a proper lancet be first procured.

When blood is to be drawn from the arm, the patient being seated in a favourable light, a bandage consisting of a riband or garter is to be tied round the upper part of the arm, about three fingers breadth above the elbow, and sufficiently tight to compress the veins, but not so as to prevent the passage of the blood through the artery, and that vein is to be chosen under which no pulsation or beating of an artery can be perceived on pressure with the finger, and which is not situated immediately over a tendon. The arm should be extended, and if the vein does not rise well, the patient ought to shut his hand or grasp a stick: the operator must then take the arm in his left hand, pressing the vein with his thumb, about two inches below the part where he means to puncture. The lancet being taken firmly between the forefinger and thumb of the right hand, is then steadily to be introduced into the vein somewhat obliquely, taking care to make the opening sufficiently large. When the quantity of blood which is deemed sufficient has flowed, the ligature is to be removed, and the edges of the orifice brought together, a small compress of fine linen is to be laid over it, and the arm bound up with a proper bandage. If, during the operation or immediately subsequent to it, the patient feels any disposition to faintness, he should be laid in an horizontal posture on a couch or bed, and a little water be sprinkled on his face, which, with the admission of fresh air, generally carries off every unpleasant feeling.

The quantity of blood which is taken away must be regulated by the age, strength, constitution, and manner of life of the patient, as well as the nature and stage of the complaint which the operation is intended to relieve; and the state of the pulse is likewise to be taken into consideration. Bleeding is, however, sometimes necessary where the feeble and weak state of the pulse appears hardly to warrant it, and yet as soon as performed, this immediately rises, and acquires a considerable degree of fulness and strength, which is particularly manifested in many inflammatory diseases, especially in an inflammation of the intestines, or where there is constriction of the vessels.

Some persons accustom themselves to bleeding at certain periods of the year, but the practice is a very bad one, and should not be resorted to unnecessarily; for blood contains the principles of nourishment, and distributes them to every part of the body for its supply and refreshment, and to deprive it of these in a lavish manner cannot fail to prove injurious.

OF TOPICAL BLEEDING.

This mode of drawing blood is found highly efficacious in many diseases, and after venesection has been carried to a proper extent, may prove a powerful auxiliary remedy. In some cases it is even more desirable than taking away blood from the arm or system, as in local inflammations, ophthalmies, severe fixed pains in the head, &c. Topical bleeding may be performed in two ways, viz. either by the application of leeches, or cupping with previous scarification.

Leeches are highly useful, and can be applied to the most delicate parts, as the eyes, gums, breasts, testicles, &c. where cupping cannot be employed. It is sometimes a difficult matter however to get them to stick, and when this happens, it will be necessary, having first cleansed the parts very well with a sponge wetted in warm water, to smear them over with a little milk or fresh blood. After doing so, they will, in general, fasten on readily and perform their office properly, provided they are lively and active. Fresh porter is said to have been found to allure leeches to fasten themselves when every other means has been used to no purpose. If the weather is cold, leeches are liable to become torpid, and should be gently warmed by breathing on them for a little time prior to their application. Should the person who applies them have a dislike to the handling of them, they may be put into a wine glass which has a piece of stiff paper at the bottom of it to which they are apt to retire, and this be turned upside down over the part from which the blood is to be drawn. As soon as the leeches have filled their bodies with blood and drop off, the bleeding from the wounds is to be encouraged, by dabbing the parts frequently with a sponge or linen rag wetted in warm water.

It sometimes happens when the leeches drop off, that the blood continues to flow to a greater degree and a more extended period than we wish or may be proper, and occasionally to excite some alarm. In such cases the wounds must be touched with the muriated tincture of iron, oil of turpentine, or some other styptic, (see P. 2, 4, or 5, of this Class,) and in failure of these, a piece of lunar caustic may be inserted into the puncture from which the hemorrhage proceeds, the point being first scraped very fine. Afterwards the wounds may be covered with dossils of fine lint bound on tolerably tight.

The best method of treating leeches so as to make them disgorge the blood which they have sucked and render them fit for being applied a second time, is to touch them with a little vinegar instead of sprinkling salt over them, which is apt to kill them. It has been found that if the blood is gently and carefully squeezed from the leech, it is capable of resuming its functions almost immediately. Indeed, this practice is adopted by some surgeons to make them disgorge the blood which they have sucked.

In the operation of cupping, the first step is to produce a vacuum over one or more portions of the surface of the skin, and for this purpose glass cups are generally used, into which the flame of a spirit lamp, having a thick wick, is momentarily introduced, and the larger the glass (if properly exhausted of air) the less pain does the patient suffer, and the more freely will the blood flow.

When about to perform the operation, let there be provided a a hand basin with warm water, a piece of fine sponge, and a lighted candle. Place as many of the glasses in the basin as may be judged requisite to obtain the quantity of blood intended to be taken away. Four glasses will, in most cases, be required. Each glass is then to be separately held for an *instant* over the flame of the spirit lamp, and immediately placed upon the skin of the patient. The whole neatness and efficacy of the operation depend upon the quickness with which this is effected. Some operators, with the view of obviating their want of dexterity, throw a small bit of tow or paper, dipped in spirits and inflamed, into the cupping glass, the moment before it is applied; but this often adds unnecessarily to the sufferings of the patient by cauterizing the skin, doing harm also by rarefying the air more than is necessary within the glass, in consequence of which the edges of the cup compress the vessels of the skin so much as to obstruct the influx of the blood.

If the glasses have been duly exhausted of air, the skin will be observed gradually to swell up within the cup, owing to the pressure of the air upon the parts in the vicinity, as well as the expansion of the fluids contained in the cellular membrane. The skin becomes also of a dark purple colour, owing to the influx of blood into the smaller vessels. If dry cupping be only intended, the glasses may be allowed to remain on the skin for a few moments, and replaced five or six times, varying their position a little, to prevent bruising the skin. If the intention is to scarify and take away blood, the glass ought not to remain more than a minute, when it is to be removed by gently introducing the nail of the fore-finger under the edge, and the scarificator be *instantly* applied, and the lancets discharged upon the skin before the tumour has had time to subside. Upon the rapidity or slowness with which the application of the scarificator succeeds the removal of the glass, depends all the sufferings of the patient. If the skin has completely subsided before the stroke of the lancets, much unnecessary pain is inflicted.

The glasses are thus to be removed and re-applied successively. They should be removed a second time, if necessary, as soon as the blood is perceived to coagulate within them, or when they are so full as to be in danger of dropping off. Every time previous to the application of the glasses, they should be rinsed in the warm water, but not dried. To obviate the unpleasant sensation produced by the coldness of the metal, it will be advisable to pass the instrument for a moment over the flame of the lamp before using it.

To ascertain the precise quantity of blood drawn off, the contents of the cup must be emptied into a graduated glass measure, with which it will be necessary the operator should be provided.

When the operation is finished, a piece of fine soft linen rag may be applied to the wounds ; but if the patient does not object to a trifling smarting, a little spirits of wine is a preferable application, as it immediately stops the oozing of the blood, promotes the healing of the wounds, and prevents the subsequent itching, of which some patients are apt to complain, as the most unpleasant part of the operation.

The incisions with the lancets should never extend deeper than the cuticle or true skin, as nothing is to be gained by going beyond this, and unnecessary pain is thereby caused to the patient. In cupping upon the back or neck, the glasses should never be placed upon the spine itself, but on each side of it. Previously to applying the glasses, it is important to foment the skin well with a sponge and warm water. Cupping in the warm bath is rendered more efficacious by the relaxed and softened state of the skin.

The mode of cupping here detailed is conformable to what is practised and recommended by Mr. Mapleson in his Treatise, this gentleman being cupper to his Majesty.

OF DROWNED PERSONS, AND THE MEANS OF RE-ANIMATING THEM.

A severe check is often given to the principle of life by immersion in water of some continuance, without extinguishing it wholly ; hence will appear the necessity of people being instructed as to the means of restoring animation in this suspended state.

In the general aggregate of those unfortunate cases, where a person has remained under water longer than twenty or thirty minutes, there will be no great probability of his being ever re-animated ; but it would nevertheless be highly imprudent as well as inhuman not to exert every effort for that purpose, even though he had remained in that situation for a greater length of time than has been specified.

Dark brown or livid spots on the face, with great coldness and rigidity of the body, a flaccid state of the skin, glassy appearance of the eyes, and considerable distention of the belly, go far to denote the perfect extinction of life ; but the only certain and positive sign is actual putrefaction. In all cases, therefore, when this symptom is not present, and where we are unacquainted with the length of time the body may have been under water, every possible means should be employed, upon its being found, for restoring it to life, and what is necessary to be done should be executed promptly.

On the first alarm of any person being drowned, while the body is searching for, or conveying to the nearest house, the following

articles should be got ready, viz. warm blankets, flannels, a large furnace of warm water, heated bricks, a warming pan, volatile spirits or salts, a bag and pipe, or syringe, for administering a clyster, and if an electrical machine can be procured so much the better.

As soon as the body is taken out of the water, it should be conveyed to the nearest house, either in men's arms, or be placed on a door or broad board if the distance is inconsiderable; but where it is of some extent, it may be put upon straw into a cart, with the head rather in a reclining posture, that the water may easily run out which has got into the stomach, and perhaps the lungs.

The body, on its arrival at the house, is quickly to be stripped of the wet clothes it may have on it, then to be wiped perfectly dry, carried into a spacious room which has a good fire in it, and be laid between warm blankets, spread upon a mattress or low table, and on the right side in preference to the left, that the passage of blood from the heart may be somewhat favoured by the position. It will also be necessary that the head be covered with a woollen cap, and that it be properly elevated with pillows. Bricks, which have been heated, or bags filled with warm sand, are to be applied to the feet.

These steps having been adopted, and five or six attendants procured, two or three of them may commence rubbing different parts of the body with warm flannels for the purpose of restoring its heat and the circulation of the blood. The restoration of the important functions of the lungs is to be attempted at the same time by another assistant, who is to force air into them through a flexible tube of elastic gum, or through a common pipe or bellows introduced into the nostril, at the same time compressing the other, and keeping the person's mouth closely shut, to prevent the escape of the air through it instead of its passing into the lungs. While one assistant is thus engaged, another must at the same time gently press down the ribs, as soon as their elevation indicates a distention of the lungs, and this alternate inflation and compression ought to be continued for a considerable time, so as to imitate natural respiration in some degree: the friction of the body by the other assistants being still continued, and the applications to the feet renewed as often as they lose their heat.

With the view of exciting the action of the heart, gentle electric shocks may be passed through its region, from the left to the right side, and from the front to the back, alternately.

Where electricity is employed, the body should always be insulated, which may be done by placing it on a door, supported by a number of quart bottles, the sides of which have been previously wiped well with a dry towel, to remove any moisture from them. It would appear also that galvanism might be attended with infinite advantage as an auxiliary remedy in cases of suspended animation by drowning, and that more benefit may be derived from it than even from electricity.

In order to stimulate the intestines, as well as the lungs and

heart, injections, composed of warm water, in which a table-spoonful of common salt has been dissolved, should be thrown up the bowels; or we may substitute one of warm water, to which has been added a little rectified spirit of volatile liquor of hartshorn. The fumes of tobacco should never be used; for they might prove highly injurious by the power they possess of diminishing the vital functions. To assist in rousing the vital principle, a slight agitation of the body every now and then may be adopted.

If, after a vigorous employment of these several means for the course of two hours at the least, there should be no symptom of returning life, and a warm bath can be obtained, the patient should be put into it, or, for want of warm water, warm ashes or grains may be heaped plentifully on the body, and there be kept for some hours; as there are instances on record, where life has not been restored until after the means which have been pointed out had been persisted in four, five, or even six hours.

Bleeding is a remedy sometimes resorted to in cases of a suspension of the vital powers by drowning, but it appears to be better adapted to cases of strangulation than to the former. Where head-ach, stupor, &c. remain after the patient is re-animated, shewing evident congestion of blood in the vessels of the brain, it may be advisable to draw off some blood, either by cupping and the scarificator, or by the application of several leeches to the temples; but before the natural heat has been restored to the body, and where the symptoms just mentioned do not exist, bleeding will be more likely to prove injurious than serviceable.

On the appearance of a return of life, and the patient is so far recovered as to be able to swallow, a tea-spoonful of the solution of ammonia, diluted with three times that quantity of water, or a little warm brandy and water made strong may be got into the stomach, repeating the dose now and then. He should then be put into a warm bed, having his head and shoulders properly elevated, and his feet and legs wrapped up in warm flannels. He should by no means be left alone until the senses are perfectly restored, and he is able to assist himself; as persons have been known to relapse, and have been lost after the vital functions were, to all appearance, tolerably re-established, by withdrawing the proper attention from them too soon.

Before I conclude the subject, I beg leave to observe, that in cases of a suspension of life, let the cause have been what it may, the cessation of the circulation and respiration, and coldness with rigidity of limbs taken separately, ought never to be relied upon as sure signs of death, and that even when combined, leave a slight opening for doubt; but that putrefaction is the only certain proof of its reality. Hasty interment is therefore improper in all cases of suspended animation.

SUSPENDED ANIMATION BY HANGING, SUFFOCATION, OR EXPOSURE TO INTENSE COLD.

Where the vital principle is supposed to be only suspended, not wholly destroyed, by strangulation resorted to under a fit of despondency, it will be proper to adopt the same means for re-animating the person as have been pointed out for the recovery of those who are drowned, with the addition, however, of drawing off three or four ounces of blood, either by opening the jugular vein on one side of the neck, or by applying cupping glasses and a scarificator to the back of it, with the view of lessening the quantity contained in the vessels of the brain, and thereby taking off the pressure from it. To unload the vessels without weakening the powers of life is the object to be kept in view; and, therefore, the quantity of blood drawn off should not exceed an ordinary teacupful, except in a person of a full habit and robust constitution, and then five or six ounces may be taken away.

The vital principle is not unfrequently suspended by the deleterious fumes arising from fermenting liquors; from charcoal, coke, &c. in a state of combustion; from metals in a state of fusion, particularly arsenic and mercury; as also very often from respiring the foul air of wells, privies, caverns, and mines.

In such cases the following appearances present themselves: The head, face, and neck are swoln, the eyes protuberate, the tongue hangs out at one side of the mouth, the jaws are firmly closed, the face is of a livid colour, and the lips of a deep blue; the belly is distended and prominent, the person is insensible to any pain, and appears in a profound sleep.

The first sensations he experiences on inhaling air vitiated with noxious fumes are, giddiness, head-ach, stupor, faintings, inactivity, numbness, and occasionally convulsions.

As soon as possible after a person has been discovered to have been suffocated by any kind of noxious fumes, he should be freely exposed to pure, fresh, and cool air, being supported at the same time in a leaning posture. Volatile salts, or other stimulating substances are then to be applied to the nose, the face be sprinkled with vinegar, and the pit of the stomach with cold water. The legs may likewise be put into a cold bath. Possibly a sudden immersion of the whole body in cold water might be of service, as it is well known that the recovery of the dogs, which are made the subjects of experiment in the Grotto del Cani, is effected by plunging them immediately into a neighbouring lake.

After each application of the vinegar and cold water, every part of the body should be well rubbed with flannels or a soft brush, the temples and insides of the nostrils be stimulated by volatile spirits, and heated bricks, or bottles filled with warm water, be applied to the soles of the feet, then leaving the person for a few minutes in an undisturbed state. In addition to these

means, it may be advisable to administer an active clyster, (see the Class of Purgatives, P. 6,) and if this does not produce a good effect, one consisting of water, mixed with a fourth part of vinegar, may be tried.

To restore the circulation of the blood, due warmth to the body, and respiration, the same means may be used as have been recommended in the case of suspended animation by drowning.

On a return of life (usually marked by a foaming at the mouth and shivering of the whole body, especially after affusions of cold water,) a little lemonade, or water acidulated with vinegar, should be given to the patient as soon as he is capable of swallowing. If there is an inclination to vomit, it may be encouraged by stimulating the throat with a feather dipped in oil, continuing gentle friction to different parts of the body at intervals.

Should all these means, however, fail in restoring animation, it then will be advisable to employ electricity or galvanism, repeated shocks being passed through the chest. An attempt may also be made to take away blood from the arm, and if none will flow, the jugular vein in the neck may be opened. The body should not be abandoned or deserted until after a considerable lapse of time, and a due perseverance in all the means which have been specified as the best calculated to re-animate it; for persons have been known to recover after lying in a state of insensibility a day or two.

In places where a lighted candle will not burn, but becomes extinguished, animal life cannot be supported; and, therefore, in all cases where wells, cist-pools, or deep vaults, are to be opened, a large candle lighted ought to be let down very slowly to the bottom before any person attempts to descend. If the candle is extinguished, or even if the flame is materially affected, the well is unsafe to venture in; but if it burns clear and brilliant, there is no danger. If the candle is extinguished, means must be adopted to remove the noxious air before any one descends. To effect this, the following modes will answer; 1st, Let the leather pipe of an engine be introduced to the bottom of the well, if empty, or the surface of the water, and affix a blacksmith's bellows to the other end, when, by well working this, the foul air may be expelled. 2dly, Carbonic acid gas may be bailed out with a bucket made of coarse cloth like a bag, with a round piece of board, nearly the diameter of the well at the bottom; let the bucket thus made down upon the water, so that the bottom may rest upon it, and let the bag fall upon the bottom; then draw it up, when it will be filled with foul air, which may be brought up to the surface, and emptied by turning out and shaking the bag. 3dly, Let down about a bushel of quick lime, dipping it into the water occasionally to slake it; or if there be no water in the well, throw down some for the purpose. 4thly, Pour down a large quantity of boiling water repeatedly into the well.

Either of these methods ought to be persevered in till a candle will burn with ease; and even then, in no case ought any person

to descend without a strong rope securely fastened round his waist, and he should be attentively watched, so as to be drawn up immediately, if necessary.

The fire damp or carburreted hydrogen gas, which is formed in considerable quantities at the bottom of coal pits, is frequently the cause of the death of many of the miners, by an unexpected explosion in consequence of the flame of a candle or lantern being brought near. A very effectual apparatus for preventing such accidents, by consuming the gas, has been invented by Sir Humphry Davy, which promises to be of the highest utility, and ensure the the safety of all persons who descend into collieries, and that will avail themselves thereof.

Life is sometimes suspended, and now and then wholly destroyed, by an exposure to a severe degree of cold for any length of time. The person thus situated finds himself become very drowsy and much disposed to sleep, in which if he indulges he will be exposed to imminent danger. It therefore will be highly incumbent on him to rouse himself as much as possible, and keep in action. When he fails in this, his companions, if he has any, should well shake him, or even drag him about by force, until the drowsiness ceases.

It is, however, to be suspected that most of the travellers who perish among snow fall martyrs to their drinking intemperately of spirituous liquors: fool-hardy, under the false courage excited by dram drinking, they sally out in the dark to explore their way, and soon lose the road from the change of objects which falling snow occasions. The effects of the dram, in this situation of distress, accelerate death by assisting to bring on drowsiness or sleep, which is almost irresistible; he lays himself down, and in all probability never rises again, or should he be so fortunate to escape with his life, his extremities will be frost bitten.

The treatment to be adopted in cases of universal torpor and insensibility from an exposure to severe cold, must be as follows. The person to whom such an occurrence has taken place, should be conveyed with all possible speed to a convenient place or house, where the necessary assistance can be given. If the body is found naked, it should be quickly covered with a blanket, leaving the head and face bare. If there is snow on the ground, the body may at first be rubbed gently from the stomach to the extremities with it. Very shortly afterwards, frictions are to be made with cloths steeped in cold water, the temperature of which is to be gradually increased, so as to heat the body by slow degrees. Some of the water may at the same time be sprinkled in the face, and the nostrils and temples be irritated with volatile spirits, such as the solution of ammonia or liquor of hartshorn.

As soon as any degree of heat is restored to the body, and the limbs become somewhat flexible, the person should be placed in a dry but not warmed bed, and then be well rubbed with flannels or a soft brush; his lungs should also be inflated in the manner

advised in cases of drowning, and an irritating clyster, consisting of near a pint of water, with the addition of a middle sized spoonful of volatile liquor of hartshorn, or of a little mustard, rum, brandy, or gin, be administered from time to time.

If the power of swallowing is restored, we should give the person some gently stimulating and warm drink, such as a little thin broth with some brandy in it, or water with some wine and spice, administering these by a spoonful at a time, repeating the dose frequently. When the power of swallowing does not soon return, it would seem advisable to introduce the liquor into the stomach by means of an elastic gum catheter inserted into the gullet through the mouth. The liquor may be injected through this into the stomach, either by means of a common syringe, or that of an elastic gum bottle, having a small pipe affixed to it. The other means recommended in cases of suspended animation by drowning, are also to be adopted and persevered in for a proper length of time.

As long as the body remains cold, and the circulation and respiration are suspended, I think bleeding would be improper. After these functions are restored, and the natural temperature regained, if the patient should still continue in a state of stupor, and his pulse be strong and full, drawing off a few ounces of blood will be advisable, but not otherwise.

Frost Bitten.—In very cold climates, such as Russia, &c. numbers of people lose their nose, ears, fingers, and toes, by the intensity of cold, and it is not unusual for people passing each other, to call out, to take care of their nose ; for those who have been bitten by frost are frequently not sensible of it themselves ; whereas it is readily perceived by others, owing to the white appearance of the part affected, and a mortification unavoidably ensues unless it is prevented in time. The parts affected are at first either to be well rubbed with snow, or be put into cold water, and afterwards subjected to warmth in the most gentle and gradual manner, by well rubbing them for a considerable time, and then covering them with gloves or stockings of worsted. The sudden application of heat is most carefully to be avoided, either by putting any thing of this nature to the parts, or even by entering into a warm room.

OF INTOXICATION AND ITS CONSEQUENCES.

Life is sometimes destroyed at once by an over-dose of ardent spirits, or indeed of any intoxicating liquor ; but in general the effects are slower, and the constitution is gradually undermined, the appetite fails, digestion is impaired, the spirits are depressed, general feebleness and debility ensue, obstructions arise in the mesenteric glands, the liver becomes hard, indurated, and enlarged, or is beset with tubercles, and dropsy at last ensues.

The incapacity of a person labouring under intoxication, may

perhaps be a more frequent cause of premature death than the positive effects of the liquor itself; he tumbles about, or falls in such positions, that the circulation becomes obstructed, and if not properly assisted in due time, life is often destroyed. No person, therefore, when drunk, should be left by himself, until his clothes have been loosened, and his body laid in such a posture as is most favourable not only for discharging the contents of his stomach, but also for continuing the vital motions.

The treatment of a person in a state of intoxication should be as follows: If he is sufficiently rational to swallow chamomile tea or warm water, a basin or two may be given to him to wash out his stomach, assisting the effect of it by irritating the gullet and fauces with an oiled feather or the finger; but if the person has lost all sense of power and motion, he should be placed in an arm chair, and secured from falling, his neck cloth, shirt collar, and every thing that is tight about him be loosened, and a free access of cool air admitted to him by opening the windows and door of the room.

Should the face be florid, the countenance swelled and bloated, the eyes prominent, and the breathing laborious, some blood should be taken away either by several leeches applied to the temples, or by opening the jugular vein in the neck, or even the temporal artery; all of which deserve a preference to bleeding from the arm. After the operation, the head and temples may be rubbed with æther, or linen rags wetted in vinegar and water be kept constantly applied to these parts, immersing the feet at the same time in warm water. It will also be advisable promptly to administer an active clyster. See the Class of Purgatives, P. 6.

If this does not answer the purpose, it might be proper to throw one up the bowels, consisting of fifteen grains of tartarized antimony, dissolved in about a pint of thin gruel as advised in cases of great torpor from a large dose of opium; for this will not only unload the intestines of feculent matter, but likewise clear the stomach of the offending liquor, in all probability.

When the thirst is very great, with restlessness, heat, and dryness of the tongue, cold water may be drank freely, this being the best and most proper beverage. Different acids have been recommended for the purpose of correcting the intoxicating power of spirituous and vinous liquors, but the good effects that follow their use, most likely are produced by the diluting liquor with which they are blended. Spirits of hartshorn in the dose of a small tea spoonful in a glass of water, is said to counteract the inebriating effects of fermented and spirituous liquors. It is therefore worthy of a trial.

Cold affusion, by pouring cold water over the head and shoulders, and repeating the process frequently as long as the stupor continues, has been found of high utility in cases of extreme intoxication from spirituous liquors; as well as in those where opium, or any of its preparations have been taken in excess through mistake, or with the intention of destroying life.

A TABLE

OF

THE WEIGHTS AND MEASURES

USED BY APOTHECARIES AND DRUGGISTS.

WEIGHTS.

The Pound	℔	Contains	Twelve Ounces.
—— Ounce	℥		Eight Drachms.
—— Drachm	ʒ		Three Scruples.
—— Scruple	℈		Twenty Grains.
—— Grain	gr.		

MEASURE OF FLUIDS.

The Gallon	Cong.	Contains	Eight Pints.
—— Pint	O.		Sixteen Fluid Ounces.
—— Fluid Ounce	℥.		Eight Fluid Drachms.
—— Fluid Drachm	ʒ.		Sixty Minims.
—— Minim	♏.		

The London College of Physicians have ordered the minim measure to be substituted instead of the drop; but it should be understood that there is an inequality between them, and that ten minims, by the graduated glass measure, will amount to about fifteen drops. In this Work the drop has been adopted, as very few persons, except those who are of the Profession, are possessed of the graduated measure.

A LIST

OF THE

PRINCIPAL MEDICINES USED IN PRACTICE,

WITH THEIR PROPER DOSES FOR ADULTS AND CHILDREN, AND THEIR EFFECTS.

N.B.—The Doses specified are such as are usually given, but they must be increased or diminished according to the strength and habit of the Patient, and the age, by the following rule:

Two thirds of the dose from the age of 14 to 16. One half, from 7 to 10. One third, from 4 to 6. One fourth, to one of 3 years. One eighth, to one of a year.

Medicines.	Doses.		Effects.
	Adults.	Children From 2 to 4 years.	
Acacia, Powder of Gum - - -	20 grs. to 1 drachm	5 grs. to 10 grs.	Astringent
———, Mucilage of	½ oz. to 1 oz.	1 drm. to 2 drms.	
Acid, Acetous - -	20 drops to 1 drm.	6 drops to 10 drops	Antiseptic
——, Muriatic - -	10 drops to 20 drps.	3 drops to 8 drps.	Antiseptic and Tonic
——, Nitric, diluted	10 drops to 20 drps.	3 drops to 8 drps.	Ditto.
——, Sulphuric, diluted - - -	15 drops to 20 drps.	3 drops to 8 drps.	Astringent and Tonic
Æther, Sulphuric -	30 drops to 1 drm.	6 drops to 10 drps.	Antispasmodic
Almond, Mixture or Emulsion -	A wine glass full	1 to 2 tab.-sps. ful	Demulcent and Pectoral
———, Oil of - -	1 drachm to 2 dms.	20 drops to 1 drm.	Ditto
Aloes, Socotrine -	10 grs. to 20 grs.	3 grs. to 6 grs. -	Purgative
Aloetic Pills - - -	10 grs. to 30 grs.		Ditto
Alum - - - - -	5 grs. to 15 grs.	2 grs to 5 grs. -	Astringent
Ammonia, Subcarbonate of - -	5 grs. to 15 grs.	2 grs to 4 grs. -	Diaphoretic and Stimulant
Ammonia, Solution of Acetate of -	2 drms. to 6 drms.	½ a drm. to 1 drm.	Diaphoretic, externally, cooling
Ammoniac, Gum -	10 to 20 grains	5 to 10 grains -	Expectorant
———, Mixture	½ oz. to 1 oz.	1 tea-spoonful to 2	Ditto
Antimonial Powder	2 grains to 4 grs.	½ a grain to 1 gr.	Diaphoretic
———, Wine, as an Emetic -	3 drachms to 6	1 drm. to 3 drms.	Emetic
Antimony Tartarized, Solution of	15 drops to 30 -	5 drops to 10 dps.	Diaphoretic, Emetic in large doses
———, in Powder	$\frac{1}{6}$ of a grain to ½	$\frac{1}{12}$ of a gr. to ¼ gr.	Ditto
———, Precipitated Sulphur of	1 to 4 grs. - -		Ditto ditto
Aromatic Confection	15 to 30 grs. - -	4 to 8 grains -	Astringent and Cordial
———, Powder	6 to 10 grs. - -	2 to 4 grains -	Stomachic
Arsenic, Solution of	4 to 8 drops - -	1 to 3 drops -	Powerfully Tonic
Assafœtida Mixture	4 drms. to 1 ounce	1 to 2 tea-spoonsful	Antispasmodic
——- Pill, Compound	10 to 20 grs. -		Ditto and Emmenagogue
——, Volatile Spirit of	20 to 40 drops -	4 to 8 drops -	Ditto
Balsam of Copaiva	15 to 30 drops.	5 to 8 drops -	Balsamic and Diuretic

Medicines.	Doses. Adults.	Doses. Children From 2 to 4 years.	Effects.
Balsam of Peru - -	5 to 12 drops - -		Stimulant
—— Tolu, Tincture of	½ a drm. to 1 drm.		Pectoral
Bark of Cascarilla, Powder of the	10 to 40 grains	5 to 10 grains -	Stomachic
——Peruvian, Powder of - - - -	½ a drm. to 2 drms.	10 to 20 grains -	Tonic and Antiseptic
Bark, Peruvian, Decoction or Infusion	1 to 2 ounces - -	1 tab. spoonf. to 2	Ditto.
Broom, Green, Decoction of - -	Half a pint daily		Diuretic
Calomel, or Submuriate of Mercury	2 grains to 10 - -	1 grain to 4 - -	Purgative and Alterative
Calumba, Infusion of	½ oz. to 10 drms.	1 drm. to ½ ounce	Tonic and Astringent
Camphor, Gum - -	2 grains to 5 grs.	1 to 2 grains - -	Antispasmodic
——, Mixture	½ oz. to 10 drms.	2 drms. to 4 drms.	Ditto and Febrifuge
Chamomile, Powder of	from 30 to 60 grs.	5 to 10 grains - -	Stomachic and Tonic
——, Extract of	10 grains to 20 -		Ditto.
Cardamoms, Powder of	5 grains to 10 grs.	3 grains to 6 - -	Carminative
Carraway Seeds, in Powder - - -	10 grains to 30 -	5 grains to 10 - -	Ditto and Aromatic
Cascarilla Bark, Powder of - -	10 grains to 20 -	3 grains to 6 - -	Stomachic
——, Infusion of	½ oz. to 10 drms.	1 drm. to 4 drms.	Ditto and Tonic
Castor Oil - - - -	½ ounce to 1 ounce	1 to 2 tea-spoonsf.	Laxative
——, Russian, Powder of - -	5 to 10 grains -	2 to 4 grains - -	Antispasmodic
Chalk, Prepared -	20 to 40 grains -	10 to 20 grains -	Absorbent and Astringent
——, Mixture -	1 to 2 ounces - -	2 to 4 drachms -	Ditto
Cinnamon, Powder of	8 to 16 grains - -	3 to 6 grains - -	Stomachic
——, Tincture of	2 drms. to 4 drms.	20 to 60 drops -	Ditto
Colocynth, Compound Pill of -	10 to 20 grains -		Purgative
——, Extract of	15 to 20 grains -	3 to 8 grains - -	Laxative
Contrajerva, Powder	10 to 30 grains -	4 to 8 grains - -	Diaphoretic
Copper, Ammoniated	½ a grain to 3 grs.		Tonic & Antispasmodic
Coriander Seeds -	15 grs. to 1 drm. -	5 grains to 10 - -	Carminative
Cowhage, Down of	10 to 15 grains -	5 to 10 grains - -	Anthelmintic
Cretaceous Powder with Opium -	10 to 20 grains -	5 to 8 grains - -	Astringent
Cucumber Wild, Powder of - -	⅓ of a gr. to 2 grs.		Actively Purgative
——, Extract of	½ to 2 grains - -		Ditto
Dandelion, Extract of	15 grs. to 30 grains	3 to 8 grains - -	Laxative and Diuretic
——, Expressed Juice of - - -	1 oz. to 3 ounces		Ditto
Decoction of Calcined Hartshorn	3 to 6 ounces - -	1 to 2 ounces - -	Astringent
——, Inner Bark of Elm - - -	4 to 12 ounces -	1 oz. to 3 ounces	Alterative
——, Peruvian Bark	2 to 4 ounces - -	1 to 2 ounces - -	Tonic
——, Sarsaparilla	4 to 12 oz. daily -	1 oz. to 4 daily -	Alterative
——, Compound of - -	4 to 12 oz. daily -	1 oz. to 4 daily -	Ditto
Electuary of Scammony - - - -	20 grs. to 1 drm. -		Purgative
——, Senna or Lenitive - - -	2 drachms to 6 -	1 drachm to 2 -	Laxative
Extract of Bark, Peruvian - -	1 scruple to ½ drm.	5 to 10 grains - -	Tonic

Medicines.	Doses. Adults.	Doses. Children From 2 to 4 years.	Effects.
Extract of Chamomile	10 grs. to ½ drm.	4 to 8 grains	Tonic
———, Gentian	10 to 30 grains	4 to 8 grains	Stomachic and Tonic
———, Logwood	10 to 30 grains	3 to 8 grains	Astringent
———, Black Hellebore	3 to 10 grains		Deobstruent & Purgative
———, Jalap	10 to 20 grains	4 to 8 grains	Purgative
———, Poppies, White	2 to 6 grains		Anodyne
Fern, Root of, in Powder	½ drm. to 3 drms.	10 grains to 30	Anthelmintic
Fox Glove, Powder of	½ grain to 2 grs.		Emetic and Diuretic
———, Decoction and Infusion	2 drms. to 6 drms.		Ditto
———, Tincture of	10 to 20 drops		Sedative and Diuretic
Gentian, Infusion of	1 to 3 ounces	2 to 8 drachms	Stomachic and Tonic
Ginger, Powder of	20 to 60 grains	5 to 10 grains	Stomachic
Galbanum, Gum	10 grains to 30 grs.		Deobstruent
Guaiacum, Gum	5 grains to 20 grs.		Sudorific
Gum Acacia or Arabic	30 grs. to 2 drms.	10 to 30 grains	Demulcent & Pectoral
——, Gamboge	2 to 10 grains		Actively Purgative
Hartshorn, Prepared or Burnt	20 grs. to 1 drm.	6 to 10 grains	Astringent
———, Volatile Spirits of	20 to 40 drops	4 to 8 drops	Stimulant
Hellebore White Decoction of	Only used as an external application.		
Hemlock, Powder of	2 to 5 grains	1 to 2 grains	Sedative
———, Extract of	2 to 5 grains		Ditto
Hiera Picra	20 to 30 grains		Purgative
Honey of Squills, or Oxymel	10 to 40 grains	5 to 10 grains	Expectorant
Jalap, Powder of	20 to 30 grains	5 to 10 grains	Purgative
Ipecacuanha, Powder	15 to 30 grains	5 to 12 grains	Emetic
———, Compound Powder, or Dover's Powder	5 to 20 grains	3 to 6 grains	Diaphoretic
———, Wine of	4 to 10 drachms	2 to 3 drachms	Emetic
Iron, Ammoniated	4 to 20 grains	2 to 4 grains	Tonic and Emmenagogue
——, Muriated Tincture of	10 to 30 drops	3 to 5 drops	Tonic
——, Subcarbonate of	4 to 20 grains	2 to 4 grains	Ditto
——, Sulphate of	2 to 5 grains	1 to 2 grains	Ditto
—— & Myrrh, Pills of	10 to 20 grains		Ditto
James, Dr. Powder	3 to 5 grains	½ a grain to 2 grs.	Diaphoretic
Juniper Berries, Decoction & Infusion	2 to 4 ounces	½ oz. to 2 ounces	Diuretic
Kino Gum	10 to 30 grains	3 to 10 grains	Astringent
Lead, Solution of the Acetate of	Only used externally		Discutient and Cooling
——, Superacetate of	½ gr. to 1 & ½ gr.		Astringent & Sedative
Lime Water	4 to 8 ounces	½ oz. to 1 ounce	Ditto and Tonic
Magnesia	20 to 40 grains	5 to 10 grains	Absorbent
———, Carbonate of	20 to 40 grains	5 to 10 grains	Ditto
———, Sulphate of or Epsom Salts	2 drms. to 6 drms.	1 to 2 drachms	Laxative
Manna	½ oz. to 1 ounce	1 to 2 drachms	Ditto
Meadow Saffron (Colchcium) Wine of	1 to 2 drachms		Purgative
Mercurial or Blue Pill	5 to 10 grains	.....	Alterative and Deobstruent
———, Pill of the Submuriate	5 to 10 grains		Ditto

Medicines.	Doses. Adults.	Doses. Children From 2 to 4 years.	Effects.
Mercury with Chalk	4 to 10 grains -	1 to 3 grains - -	Alterative, &c.
——, Oxymuriate or Corrosive Sublimate	⅛ to 1 grain -		Ditto and Stimulant
——— Solution of	1 drm. to ½ ounce		Ditto
——, Submuriate or Calomel -	1 grain to 2 grains	½ grain to 1 grain	Purgative & Alterative
Musk - - - - - -	6 to 20 grains - -	2 to 8 grains - -	Antispasmodic Stimulant
Mustard Seeds - -	1 drachm to 1 oz.		
Myrrh, Powder of -	10 grains to 40 grs.	5 to 10 grains - -	Tonic
—— and Iron, Pills of	10 grs. to 1 scruple		Ditto & Emmenagogue
Opium in substance	½ grain to 2 grains		Anodyne
——, Confection of	10 to 30 grains -	5 to 10 grains - -	Ditto and Astringent
Poppies, White, Extract of - - - -	5 to 10 grains - -	1 to 3 grains - -	Ditto
——, Syrup of -	2 to 6 drachms -	1 tea-spoonful - -	Ditto
Potash, Acetate of -	15 to 30 grains -	5 to 10 grains - -	Diuretic
—— Nitrate of (Nitre)	10 to 30 grains -	4 to 8 grains - -	Ditto and Refrigerant
——, Solution of -	10 to 30 drops -		Antacid and Diuretic
——, Sulphate of (Glaubers Salts)	4 to 6 drachms -	1 to 2 drachms -	Purgative
Potash, Supertartrate of (Crystals of Tartar) - - -	1 to 3 drachms -	10 to 30 grains -	Diuretic & Refrigerant
——, Tartrate of (Soluble Tartar)	1 scruple to ½ oz.	10 to 20 grains -	Laxative
Quassia, Infusion of	1 to 4 ounces -	2 to 10 drachms -	Tonic
Quinine, Sulphate of	5 grains - -	2 grs. - - - -	Strong Tonic
Rhubarb, Powder of	10 to 40 grains -	5 to 10 grains -	Laxative
Roses, Confection of	½ drm. to 2 drms.	10 grs. to 1 scruple	Astringent and Tonic
——, Acidulated Infusion of - -	1 to 4 ounces - -	2 to 6 drachms -	Ditto and Refrigerant
——, Syrup of -	1 to 3 drachms -	½ drm. to 1 drm. -	Laxative
Sarsaparilla, Powder of	½ drm. to 2 drms. -	5 to 20 grains - -	Alterative
———, Simple Decoction of - -	1 pint a day - -	2 to 6 oz. a day -	Ditto
——, Compound Decoction of - -	2 oz. to ½ pint a day	2 to 4 oz. a day -	Ditto
Scammony, Powder of	10 to 15 grains -	2 to 6 grains - -	Drastic Purgative
———Compound with Submuriate of Mercury - -	15 to 30 grains -	4 to 6 grains - -	Ditto
Senna, Confection of	1 to 3 drachms -	20 to 30 grains -	Laxative
——, Infusion of -	2 to 3 ounces - -	3 to 6 drachms -	Ditto
Sperma Ceti - - -	½ drm. to 1 drm.	10 to 20 grains -	Demulcent
Spirit of Carraway -	1 to 4 drachms	20 to 40 drops -	Carminative
——— Cinnamon	1 to 4 drachms	20 to 40 drops -	Stomachic
——— Fetid of Ammonia - -	½ drm. to 1 drm.	5 to 10 drops -	Antispasmodic and Stimulant
——— Horseradish	1 to 4 drachms -		Stimulant & Diuretic
——— Juniper -	1 to 4 drachms -	20 to 60 drops - -	Ditto ditto
——— Lavender Compound -	30 to 90 drops - -	10 to 20 drops - -	Ditto
——— Nitric Æther	½ drm. to 1 drm. -	15 to 30 drops - -	Diuretic
——— Nutmeg -	1 to 4 drachms	15 to 30 drops - -	Carminative
Sponge, Burnt - -	20 to 30 grains.	8 to 15 grains - -	Deobstruent
——, Lozenges of	1 twice or thrice a day		Ditto
Sulphur Sublimed, or Flowers of -	½ drm. to 2 drms.	20 to 40 grains	Diaphoretic and Laxative
——— Precipitated, of Antimony -	1 to 4 grains - -	½ grain to 1 grain -	Alterative

Medicines.	Doses. Adults.	Children From 2 to 4 years.	Effects.
Squill, Pills of	5 to 10 grains		Expectorant
———, Powder of	1 to 2 grains		Ditto and Diuretic
———, Oxymel of	½ drm. to 3 drms.	20 to 40 drops	Ditto
Syrup of Buckthorn	2 to 6 drachms	1 tea-spoonful	Purgative
——— Roses	2 drms. to 1 ounce	1 to 2 drachms	Gently Laxative
——— Tolu	1 to 4 drachms	½ drm. to 2 drms.	Expectorant
——— White Poppies	1 drm. to 1 ounce	1 to 3 drachms.	Anodyne
Tin, Filings and Powder of	½ drm. to 1 drm.	10 to 20 grains	Anthelmintic
Tincture of Aloes	3 drms. to 1 ounce	60 to 100 drops	Purgative
——— Assafoetida	1 to 3 drachms	10 to 30 drops	Antispasmodic
——— Bark, Peruvian	1 drm. to ½ ounce	30 drps. to 60 drps.	Tonic
——— Compound or Huxham's	1 drm. to ½ ounce	30 drps. to 60 drps.	Ditto
——— Camphor, Compound of, or Paregoric Elixir	1 to 3 drachms	30 to 60 drops	Anodyne
——— Calumba	½ drm. to 3 drms.	20 to 40 drops	Tonic
——— Cantharides	15 to 30 drops		Diuretic & Stimulant
——— Cardamoms	1 drm. to ½ ounce	15 to 30 drops	Stomachic
——— Cascarilla	1 drm. to ½ ounce	20 to 40 drops	Tonic
——— Castor	20 drops to 2 drms.	10 to 20 drops	Antispasmodic
——— Catechu	1 to 2 drachms	20 to 30 drops	Astringent
——— Gentian Compound	1 to 4 drachms	20 to 30 drops	Tonic
——— of Guaiacum, Volatile or Ammoniated	1 to 2 drachms		Sudorific
——— Hellebore Black	30 to 60 drops		Emmenagogue
——— Kino	1 drm. to 3 drms.	15 to 30 drops	Astringent
——— Jalap	1 to 4 drachms	20 to 40 drops	Purgative
——— Myrrh	½ drm. to 1 drm.	15 to 30 drops	Tonic and Antiseptic
——— Opium (Laudanum)	20 to 60 drops	3 to 8 drops	Anodyne
——— Rhubarb	½ oz. to 1 ounce	1 to 3 drachms	Laxative
——— Senna	2 to 6 drachms	½ drm. to 1 drm.	Purgative
——— Snake Root	½ drm. to 2 drms.	20 to 40 drops	Stimulant & Sudorific
——— Valerian	½ drm. to 2 drms.	20 to 30 drops	Antispasmodic.
—— Ammoniated of	30 to 90 drops		Ditto
Turpentine, Oil of	1 drm. to 1 ounce	5 to 12 drops	Stimulant, Diuretic, and Anthelmintic
———, Venice	20 to 60 grains		Diuretic
Valerian, Powder of	1 scruple to 2 drms.	8 to 12 grains	Antispasmodic
Uva Ursi, Powder of	15 grains to 1 drm.		Astringent and Tonic
Wine of Aloes	½ oz. to 1 ounce		Purgative
——, Antimonial	20 to 90 drops	5 to 15 drops	Diaphoretic & Emetic
——, of Ipecacuanha	½ oz. to 10 drms.	1 to 3 drachms	Emetic
——— Iron	1 to 4 drachms	20 to 40 drops	Tonic
——— Opium	15 to 60 drops	6 to 8 drops	Anodyne
Zinc, Oxyd of	1 to 5 grains	½ grain to 1 grain	Tonic
——, Sulphate of	10 grains to ½ drm.		Active Emetic

THE

DIFFERENT CLASSES OF MEDICINES,

AND FIRST OF

ABSORBENTS,

Or Medicines which counteract Acidities in the Stomach and Bowels.

P. 1.—Take of the Carbonate of Magnesia, one drachm.
Powder of Rhubarb, five grains,
Compound Powder of Cinnamon, three grains.
Mix them together. This dose may be taken by an adult morning and evening.

P. 2.—Take of Prepared Chalk, one scruple.
Rhubarb in Powder, five grains.
Mix them. Take this powder about twice or thrice a day.

P. 3.—Take of the Carbonate of Magnesia, two scruples.
Peppermint Water.
Common Water, equal parts, six drachms of each.
The Solution of Subcarbonate of Potass, ten drops.
Tincture of Calumba, 2 drachms.
Mix them. Take this draught twice in twenty-four hours.

P. 4.—Take of Prepared Chalk, half a drachm.
Cinnamon Water, six drachms.
Common Water, six drachms.
The Solution of Potass, twelve drops.
Tincture of Rhubarb, 2 drachms.
Mix them. This draught may be repeated twice a day.

P. 5.—Take of Chalk Mixture, three ounces.
Cinnamon Water, one ounce.
The Solution of Potass, twenty-four drops.
Syrup of Orange Peel, three drachms.
Mix them. Of this mixture an adult may take two dessert-spoonsful three times each day.

P. 6.—Take of Magnesia, one drachm.
Common Water, four ounces and a half.
Spirits of Cinnamon, three drachms.
Solution of Ammonia, fifty drops.
Mix them. Take two table-spoonsful of this mixture occasionally.

P. 7.—Drink one Pint of Lime Water daily, mixed in an equal quantity of Milk; or take a tea-cupful of the Decoction of Calcined Hartshorn, thrice a day.

ALTERATIVES.

Medicines given with a view to re-establish the healthy functions of the animal œconomy, without producing any sensible evacuation.

P. 1.—Take of the Powder of Sarsaparilla, one drachm.
Submuriate of Mercury, one grain.
Mix them. This dose may be given morning and night.

P. 2.—Take of the Powder of Rhubarb, four grains.
Carbonate of Magnesia, ten grains.
Submuriate of Mercury, one grain.
Mix them. This dose may be given either once or twice a day, according to the state of the patient.

P. 3.—Take of the Submuriate of Mercury, half a grain.
Powder of Sarsaparilla, one scruple.
Antimonial Powder, half a grain.
Mix them. This dose may be repeated morning and night.

P. 4.—Take of the Submuriate of Mercury, one drachm.
Tartarized Antimony, ten grains.
Opium, fifteen grains.
Simple Syrup, as much as necessary.
Form these into a mass, and divide it into sixty pills, of which take one every night and morning, with some gentle purgative occasionally: about a pint of the Compound Decoction of Sarsaparilla may also be drank daily.

P. 5.—Take of the Submuriate of Mercury, and
Precipitated Sulphur of Antimony each, one drachm.
Powder of Sarsaparilla, one drachm and a half.
Mucilage of Gum Acacia, as much as necessary.
Beat them together very well, then form the mass into forty pills, and let one be taken night and morning, drinking daily about a pint of any of the decoctions hereinafter prescribed.

P. 6.—Take of the Submuriate of Mercury, one drachm.

Opium, half a drachm.
Camphor, one drachm.
Powder of Liquorice, half a drachm.
Common Syrup, as much as is necessary.

Beat the whole well together, and divide the mass into sixty pills, of which take one every night, or every night and morning, according to circumstances.

P. 7.—Take of the Submuriate of Mercury, twenty grains.
Opium, five grains.
The Crumbs of Bread, 1 drachm.
Common Syrup, as much as is necessary.

Beat these together in a mortar, and divide the mass into twenty pills, of which one is to be taken each night on going to bed.

P. 8.—Take of the Quicksilver Pill, one drachm.
Opium, four grains.
Mucilage of Gum Acacia, as much as requisite.

Beat the whole together, and divide the mass into eighteen pills, of which take two every night, drinking daily a pint of any of the Decoctions hereafter prescribed. See P. 12, 13, 14.

P. 9.—Take of the Oxymuriate of Mercury (Corrosive Sublimate), four grains.

Dissolve it in a glass mortar, with eight ounces of brandy or any proof spirit.

Then add about fifty drops of Wine of Tartarized Antimony.

Let the patient take a dessert-spoonful morning and night, together with half a pint of the common decoction of sarsaparilla.

P. 10.—Take of the Oxymuriate of Mercury, gr. xij.

Dissolve it in a glass mortar with one ounce of brandy, and add of the Tincture of Opium, sixty drops.
Mix them.

The patient may take from eight to eighteen or twenty drops twice a day, with half a pint of the simple decoction of sarsaparilla; but it will be best to begin with a small dose, and to increase this gradually, lest the stomach and bowels should become affected.

P. 11.—Tepid and Warm Bathing.

Either of these, particularly if composed of sea water, are good alteratives in herpetic and other cutaneous eruptions. An internal use of any mild alterative at the same time, will add to their efficacy.

P. 12.—Take of Sarsaparilla, cut and bruised, three ounces.
Bark of Sassafras Root.
Shavings of Guaiacum.
Liquorice, bruised, each half an ounce.
Bark of the Root of Mezereon, one drachm and a half.
Common water, five pints and a half.

Macerate these with a gentle heat over a fire for five or six hours, then boil down to two pints and a half, and strain the liquor when cold. Of the Decoction, drink a pint daily.

P. 13.—Take of Sarsaparilla, sliced, six ounces.
Liquorice Root, bruised, half an ounce.
Common water, eight pints.

Boil these over a slow fire until reduced to four pints, and strain the liquor, when cool. From one to two pints of this Decoction may be given every twenty-four hours, in divided doses.

P. 14.—Take of the inner Bark of Fresh Elm, bruised, four ounces.
Common or Distilled Water, four pints.

Boil these slowly until the fluid is reduced to two pints, then strain it.

In cutaneous eruptions, this Decoction may be given in doses of from four to eight ounces, twice a day.

P. 15.—Take of the Roots of Blue Cardinal Flower, one handful.
Common Water, twelve pints.

Boil them until the liquor is reduced to eight pints. The patient is to begin with half a pint twice a day, increasing the quantity after some time. As long as its purgative effect is not too considerable, its use may be continued.

P. 16.—Take of the twigs and roots of Bittersweet, or Woody Nightshade, one handful.
Common Water, four pints.

Boil the liquor until reduced to one quart, then strain it. Take half a pint a day, mixed with an equal quantity of milk.

P. 17.—Take of Strong Mercurial Ointment, one ounce.

Rub into the thighs, groins, or immediately over the part affected, one scruple or half a drachm every night on going to bed, wearing flannel next to the skin during this course, particularly in winter. If necessary, take mercury inwardly at the same time.

ANODYNES.

Those Medicines which ease Pain and procure Sleep.

P. 1.—Take of Purified Opium, twelve grains.
Extract of Liquorice, twenty-four grains.
Common Syrup, as much as necessary.

Mix them in a mortar, divide the mass into twelve pills, of which take one every night on going to bed, if rest is required. If this dose does not prove sufficient, it must be increased to two pills.

P. 2.—Take of Opium, ten grains.

Camphor, one scruple.
Castile Soap, ten grains.
Syrup of Poppies, as much as necessary.

Beat them together in a mortar, and divide the mass into twenty pills, of which one may be taken twice a day, or two at bed-time.

P. 3.—Take of the Extract of Poppies, one drachm.

Divide the mass into thirty pills, of which let the patient take from one to two or more, if necessary, on going to bed. In constitutions where opium will not agree, this or the following may be found a useful anodyne.

P. 4.—Take of the Extract of Black Henbane, one drachm.

Divide the mass into thirty pills, of which give one or two, if necessary, at bed-time.

P. 5.—Take of Cinnamon Water, half an ounce.
Common Water, half an ounce.
Tincture of Opium, thirty drops.
Syrup of Poppies, two drachms.

Mix them. This draught may be taken at bed-time, increasing the quantity of the Tincture of Opium a few drops the succeeding night, if proper rest is not obtained.

P. 6.—Take of Camphorated Mixture, ten drachms.
Compound Spirit of Æther, 20 drops.
Tincture of Opium, thirty-five drops.
Syrup of Poppies, one drachm.

Mix them. Let this draught be administered on going to bed.

P. 7.—Take of Solution of Acetate of Ammonia, half an ounce.
Spearmint Water, one ounce.
Tincture of Opium, forty drops.
Spirit of Nitric Æther, one drachm.
Common Syrup, one drachm.

Mix them. This draught may be taken at bed-time, particularly where we wish to produce a moisture on the skin at the same time, as in febrile affections.

P. 8.—Take of Opium reduced to powder, one drachm.
Ointment of the Acetate of Lead, half an ounce.
Prepared Hog's Lard, half an ounce.

Mix these well together on a slab or tile, whereby a valuable Anodyne Ointment will be formed.

P. 9.—Take of Soap Liniment, half an ounce.
Tincture of Opium, half an ounce.

Mix them in a phial. This liniment, applied over the part which is painful, may prove serviceable, if frequently rubbed in.

P. 10.—Take of Camphor Liniment, half an ounce.
Tincture of Opium, half an ounce.
Solution of Subacetate of Lead, twenty drops.

Mix them. By rubbing in a little of this liniment over parts which are painful and somewhat inflamed, twice or thrice a day, considerable relief may possibly be obtained.

P. 11.—Take of Bruised Poppy Heads, four ounces.

Boil them in three quarts of water until this is reduced to three pints, then pour off the liquor.

Add to it Camphorated Spirit, four ounces.
Tincture of Opium, one ounce.

Mix them for a fomentation. Where an anodyne fomentation is necessary, this may be employed by wringing flannel cloths out in it when warm, and applying these over the part, taking care to renew them frequently as they become cool.

P. 12.—Take of a Decoction of Barley or thin Starch, twelve ounces.
Tincture of Opium, sixty drops.

Mix them. Where we want to administer an anodyne clyster, the above may be injected.

P. 13.—Take of the Compound Decoction of Mallow, eleven ounces.
Decoction of Poppies, 1 ounce.
Tincture of Opium, forty drops.

Mix them. This is also a good anodyne clyster, and may be repeated according to circumstances.

ANTHELMINTICS

Are Medicines which procure the removal of Worms from the Stomach and Intestines.

P. 1.—Take of the Filings of Tin, twelve grains.
Quicksilver with Sulphur, fifteen grains.
Submurate of Mercury, 1 grain.

Mix them. This Vermifuge Powder may be administered for three successive nights, with some active cathartic on the fourth morning. See the Class of Purgatives.

P. 2.—Take of Indian Pink in powder, from ten grains to twenty.

Give this vermifuge powder for three successive nights. It is most efficacious when it purges, and if it produces no such effect, a grain or two of the Submuriate of Mercury, or a few grains of rhubarb may be added.

P. 3.—Take of the Hairy Down of Cowhage, eight grains.
Filings of Tin, twelve grains.

Mix them in a little treacle or honey, and let this dose be taken morning and night for

three successive days. On the fourth morning, a purgative of the Submurate of Mercury, combined with rhubarb or jalap, should be administered to bring off the worms that have been dislodged. See the Class of Purgatives.

P. 4.—Take of the Powder of Common Male Fern, one drachm or two drachms for a dose.

This vermifuge has been administered, with some success, in cases of the tape worm, but a purgative of jalap and the Submuriate of Mercury ought to be given on the succeeding day. A more certain remedy, however, in this species of worm, is the following:

Take of the Oil of Turpentine, from six drachms to one ounce and a half. The best vehicle for administering it in, will be a tea-cupful of thin gruel, and the dose may be repeated in 3 or 4 days.

P. 5.—Take of the Hairy Down of Cowhage, two drachms.

Mix it with Syrup or Molasses into a thin electuary, of which a tea-spoonful is to be given to a child of two or three years old, and double the quantity to an adult. This dose is to be exhibited in the morning fasting, for three successive days, after which, one of rhubarb with submuriate of mercury, or castor oil is to be given as a purgative.

P. 6.—The Patent Worm Lozenges of Mr. Ching.

These consist wholly of the submuriate of mercury, white sugar, English saffron, and as much water as is sufficient to form them into lozenges.

Each lozenge contains one grain of the submuriate of mercury. The dose is from one grain to six, according to the age of the patient, which is taken on going to bed. The purgative lozenges which are directed to be given in the morning, consist of the extract of jalap, submuriate of mercury, white sugar, with water sufficient to form them into a mass.

ANTIPHLOGISTICS

Are those Medicines and that Diet which tend to oppose Inflammation, or which weaken the System by diminishing the Activity of the Vital Powers.

P. 1.—Take of Nitre, in powder, fifteen grains.
Supertartrate of Potass, half a drachm.
Mix them for a dose, which may be given twice a day in febrile or inflammatory complaints.

P. 2.—Take of the Powder of Gum Acacia, half a drachm.
White Sugar, one scruple.
Nitre, ten or fifteen grains.
Mix them. This dose may be repeated three times a day.

P. 3.—Take of Barley Water, one Pint.
Nitre, one drachm.
Mix them for the patient's common drink in inflammatory diseases, or other febrile affections.

P. 4.—Take of the Subcarbonate of Potass, half a drachm.
Juice of Lemon, one ounce.
Mix them, and when the effervescence has ceased, add
Common Water, five ounces and a half.
Nitre, one drachm.
Wine of Tartarized Antimony, thirty drops.
Common Syrup, half an ounce.
Give two table spoonsful every 4 hours in inflammatory and febrile diseases.

P. 5.—Take two ounces of the above mixture in the state of effervescence, omitting the Solution of Tartarized Antimony.

The Class of Diaphoretics, as also that of Purgatives,

Are to be considered as Antiphlogistic Remedies. To these may be added an Abstemious and Low Regimen.

ANTISEPTICS

Are those Medicines which possess the Power of preventing Animal Substances from passing into a state of Putrefaction, and of obviating this when already begun.

P. 1.—Take of the Powder of Cinchona Bark, one drachm.
Aromatic Powder, five grains.
Mix them for a dose to be taken every two hours in wine or wine and water, adding thereto fifteen or twenty drops of diluted sulphuric acid.

P. 2.—Take of the Decoction of Cinchona Bark, 1 ounce and a half.
Compound Tincture of the same, two drachm
Diluted Sulphuric Acid, 20 drops.
Mix them: This draught may be administered every two or three hours.

P. 3.—Take of a strong Infusion of Cinchona Bark, one ounce and a half.
The fine Powder of the same, half a drachm.
Diluted Sulphuric Acid, 30 drops.
Mix them for a draught, to be administered every two hours or so, if the stomach will bear it.

P. 4.—Take of Cinchona Bark in Powder, one drachm.
Camphor (dissolved in a little spirit) four grains
Common water, one ounce and a half.
Tincture of Snake Root, 3 drachms.
Mix them. This draught may be given every three or four hours.

P. 5.—Take of the Compound Infusion of Roses, one ounce and a half.
Cinchona Bark in Powder, one drachm.
Oxygenated Muriatic Acid, 20 drops.
Simple Syrup, one drachm.
Mix them for a draught, to be taken every fourth or sixth hour.

P. 8.—Take of a Strong Decoction of Cinchona Bark, six ounces.
The Powder of the same, two drachms.
Compound Tincture of Cinnamon, one ounce.
Mix them, and give two table-spoonsful every two or three hours, shaking the phial, and adding twenty-five or thirty drops of the diluted sulphuric acid to each dose.

P. 7.—Take of Camphorated Mixture, three ounces.
Decoction of Cinchona Bark, three ounces.
Compound Tincture of the same, one ounce.
Mix them; and let two table-spoonsful be taken every three hours, adding twelve or fifteen drops of muriatic acid to each dose.

P. 8.—Take Oxygenated Muriate of Potass, one scruple.
Infusion of Cascarilla, 10 drms.
Tincture of Snake Root, 2 drms.
Syrup of Orange Peel, 1 drachm.
Mix them. This draught may be given every three hours in putrid fever, &c.

P. 9.—Take of Capsicum Pepper in Powder, two drachms.
Common Salt, two drachms.
Boiling Water, four ounces.
Let them stand for one hour, then strain off the liquor, and add
Of Distilled Vinegar, 4 ounces.
Honey of Roses, half an ounce.
Mix them for a gargle as well as internal use.—In the putrid sore throat, or scarlet fever, attended with sloughing, ulceration of the tonsils or palate, the frequent use of this remedy, both as a medicine and gargle, will be very beneficial.

P. 10.—Take of a Strong Decoction of Bark, six ounces.
Diluted Sulphuric Acid, sixty drops.
Tincture of Myrrh, two ounces.
The Infusion of Capsicum as above, two ounces.
Mix them for a gargle.

P. 11.—Take of the Compound Infusion of Roses, six ounces.
Tincture of Myrrh, one ounce.
Bark, one ounce.
Mix them for a gargle.

P. 12.—Take of Barley Water, 7 ounces.
Honey of Roses, half an ounce.
Oxygenated Muriatic Acid, one drachm.
Tincture of Myrrh, one ounce.
Mix them for a gargle.

P. 14.—Take of an Infusion of Malt, twelve ounces.
Linseed or Barley Meal, as much as will be sufficient to make the whole of a due consistence for a Cataplasm, then add
Two table-spoonsful of fresh Yeast.
Mix them well together. This Cataplasm possesses strong antiseptic powers, but must be applied loose, as its bulk quickly enlarges, and it ought to be changed at least twice a day.

Or,

P. 15.—Take of Wood Charcoal, fresh charred, two ounces.
Common Bread Poultice, half a pound.
Mix these together. This Cataplasm will be highly useful in all cases of external gangrene, and in sweetening fetid ulcers.

P. 16.—Take of Muriated Ammonia, one drachm and a half.
Distilled Vinegar, two ounces.
Common Water, six ounces.
Mix them. This fluid may be used as a wash for parts in a state of putridity or gangrene:

Or,

P. 17.—Take of a strong Decoction of Bark, one quart.
Camphorated Spirits, 2 ounces.
Common Vinegar, 3 ounces.
Mix them, and foment the mortified parts frequently with flannel cloths wrung out in this, made a little warm.

P. 18.—Take of a strong Decoction of Bark, one quart.
Ditto of Poppy Heads, one quart.
Camphorated Spirits, 2 ounces.
Mix them for a fomentation, to be used as the former and in similar cases.

ANTISPASMODICS

Are Medicines which possess the Power of allaying those involuntary Contractions which take place in the Muscles of the Human Body, naturally subject to the command of the Will.

P. 1.—Take of Cinnamon Water, six drachms.
Pimento Water, six drachms.
Ammoniated Tincture of Valerian, thirty drops.
Tincture of Castor, one drachm.
Sulphuric Æther, twenty drops.
Mix them. This draught may be given three or four times in the twenty-four hours, in hysterical cases.

P. 2.—Take of Peppermint Water, six drachms.
Dill Water, six drachms.
Aromatic Ammoniated Spirit, twenty-five drops.
Sulphuric Æther, twenty drops.
Tincture of Castor, one drachm.
Mix them for a draught, to be taken twice or thrice a day, in hypochondriacal, hysterical, and other nervous affections.

P. 3.—Take of Camphor, five grains. Dissolve it in a mortar with a few drops of Proof Spirit, then add of Common Water, one ounce.
Cinnamon Water, half an ounce.
Tincture of Castor, thirty drops.
Ammoniated Tincture of Valerian, twenty drops.
Mix them, and give this draught twice or thrice a day.

P. 4.—Take of Musk, fifteen grains. Dissolve it in
Cinnamon Water, ten drachms, and add
Sulphuric Æther, twenty-five drops.
Tincture of Opium, fifteen drops.
Mix them. This draught may be given in spasmodic complaints three or four times a day.

P. 5.—Take of Peppermint Water, ten drachms.
Tincture of Assafœtida, thirty drops.
Compound Spirit of Lavender, fifteen drops.
Spirits of Hartshorn, twenty drops.
Mix them. Tet this draught be taken three times a day in any nervous affection.

N. B.—Any of the before mentioned draughts may be converted into a Mixture of six or eight ounces, by adding a proportionate quantity of each medicine, and then the proper dose will be two table-spoonsful, three or four times a day.

If a preference is given to antispasmodics in small bulk, any of the succeeding prescriptions may be substituted for the former.

P. 6.—Take of Sulphuric Æther, half an ounce.
Tincture of Castor, half an ounce.
Aromatic Ammoniated Spirit, half an ounce.
Mix them. About forty or fifty drops may be taken twice or thrice daily in a little water.

P. 7.—Take of Compound Spirits of Lavender, half an ounce.
Ammoniated Tincture of Valerian, half an ounce.
Tincture of Assafœtida, half an ounce.
Mix them. The dose is the same as the former.

P. 8.—Take of Fetid Spirit of Ammonia, half an ounce.
Sulphuric Æther, half an ounce.
Tincture of Opium, two drachms.
Mix them. The dose may be about forty or fifty drops, three times a day.

P. 9.—Take of the Powder of Valerian, half a drachm.
Assafœtida Gum, half a drachm.
Camphor, one scruple.
Common Syrup, as much as will be sufficient to form them into a mass, by beating them in a mortar, then divide this into pills of five grains each, whereof two may be taken night and morning.

P. 10.—Take of Castor, one scruple.
Valerian in powder, half a drachm.
Musk, one scruple.
Oil of Amber, rectified, twelve drops.
Syrup of Ginger, as much as is sufficient.
Mix these together in a mortar, and divide the mass into pills of five grains each, of which give two night and morning.

P. 11.—Take of Camphor, one scruple.
Opium, twelve grains.
Castor, one scruple.
Extract of Cinchona Bark, half a drachm.
Common Syrup, as much as necessary.
Mix the whole well together, and form the mass into pills of five grains each. The dose may be once, twice, or thrice a day.

P. 12.—Take of the Oxyd of Zinc, one scruple.
Valerian, in powder, one drachm.
Rectified Oil of Amber, twelve drops.
Common Syrup, as much as necessary.
Mix them well, and divide the mass into thirty pills, of which take two twice or thrice a day.

P. 13.—Take of Opium, one scruple.
Camphor, half a drachm.
Castile Soap, one scruple.
Common Syrup, as much as necessary.
Mix these very well, then divide the mass into twenty pills, of which one may be taken every night, increasing the dose to two, if necessary.

N. B.—The whole Class of Tonics may be considered as Antispasmodics.

P. 14.—Take of Gum Assafœtida, one drachm. Dissolve it in a mortar with thin gruel, twelve ounces, and add
Oil of Turpentine, Tincture of Opium, forty drops.
Mix them for a clyster, which may be administered morning and evening during hysteric affections of severity and long continuance.

Or,

P. 15.—Take of Bruised Valerian Root, half an ounce.
Common Water, two pints. Boil it until reduced to one pint or somewhat less, then strain off the liquor. To this add of the
Tincture of Assafœtida, one drachm.
——— Opium, forty drops.
Mix them for a clyster in hysterical affections of any duration.

P. 16.—Take of Soap Liniment, half an ounce.
Tincture of Opium, one ounce.
Mix them. This Liniment or Embrocation may be applied externally in cramps and other spasmodic affections, rubbing a little into the parts affected very frequently.

Or,

P. 17.—Take of Camphor Liniment, one ounce.
Tincture of Opium, one ounce.
Rectified Oil of Amber, one drachm.
Mix them for a Liniment, to be used as the former.

P. 18.—Take of Opium, finely powdered, two drachms.
Rectified Oil of Amber, one drachm.
Prepared Hog's lard, one ounce.
Mix these well together, as an Ointment, which may be rubbed in when we wish to apply opium externally.

ASTRINGENTS

Are Medicines which possess a power of condensing the animal fibre, and are administered to restore diminished tonic power, and restrain secretions morbidly augmented, as that of the intestines, &c.

P. 1.—Take of the Compound Powder of Chalk, fifteen grains.
Aromatic Powder, three grains.
Rhubarb, toasted, two grains.
Mix them. This Powder may be given morning and evening,

P. 2.—Take of the Powder of Kino, ten grains.
Alum, in powder, one scruple.
Compound Powder of Chalk with Opium, ten grains.
Mix them. This Powder may be administered every four or six hours in cases of much laxity of the bowels, or in uterine hemorrhage.

P. 3.—Take of the Compound Powder of Chalk with Opium, twelve grains.
This Powder may be given three or four times a day, mixed in a little cinnamon water, where a purging prevails.

P. 4.—Take of the Powder of Gum Tragacanth, one scruple.
Alum, twelve grains.
Armenian Bole, fifteen grains.
Nitre, ten grains.
Mix them. This powder may be taken three or four times a day in those cases where blood is voided by urine, or vomited from the stomach.

P. 5.—Take of the Chalk Mixture, one ounce.
Cinnamon Water, half an ounce.
Tincture of Kino, thirty drops.
———— Opium, fifteen drops.
Syrup of Ginger, two drachms.
Mix them. This draught may be repeated three times a day or more, if necessary, in cases of severe purging.

P. 6.—Take of the Confection of Opium, fifteen grains.
Pimento Water, one ounce.
Cinnamon Water, half an ounce.
Tincture of Japan Earth, one drm.
Mix them. This draught is to be given in the same cases as the former, about three times a day.

P. 7.—Take of the Decoction of Burnt Hartshorn, five ounces.
Cinnamon Water, two ounces.
Tincture of Kino, two drachms.
———— Opium, forty drops.
Mix them. Of this Mixture, two table-spoonsful are to be given every six hours.

P. 8.—Take of the Infusion of Angustura tura Bark, one ounce.
Aromatic Powder, eight grains.
Tincture of Kino, one drachm.
———— Opium, fifteen drops.
Mix them. Let this draught be administered three or four times a day in purgings of a chronic nature.

P. 9.—Take of the Decoction of Burnt Hartshorn, one ounce.
Cinnamon Water, half an ounce.
Tincture of Japan Earth, one drm.
———— Opium, fifteen drops.
Mix these for a draught, which may be given thrice in the twenty-four-hours.

P. 10.—Take of the Compound Infusion of of Roses, one ounce and a half.
Nitre, fifteen grains.
Tincture of Kino, thirty drops.
———— Opium, fifteen drops.
Mix them. This draught may be given every four or six hours in any kind of hemorrhage.

N.B.—Any of the before mentioned draughts may be converted into the form of a Mixture, by adding a proportionate quantity of each ingredient, and then the proper dose will be two large table-spoonsful three or four times a day.

P. 11.—Take of Cow's Milk and Lime Water, equal parts.
Mix them. Drink a pint or two daily, particularly in chronic purgings and diabetes.

P. 12.—Take of Alum, in powder, two drachms.
Cow's Milk, one pint.
Boil them until the milk is curdled, then strain off the whey, and add half an ounce of Gum Acacia. The dose is a large cupful three or four times a day in uterine discharges and diabetes.

P. 13.—Take of the Confection of Red Roses, half an ounce.
Boiling Water, six ounces.
Alum, one drachm.
Sulphuric Acid, forty drops.
Mix them. This gargle to be used in the inflammatory sore throat.

P. 14.—Take of the Compound Infusion of Roses, six ounces.
Tincture of Myrrh, half an ounce.
Borax, half a drachm.
Honey of Roses, three drachms.
Mix them. This gargle may be used with much advantage in ulcerations of the mouth and throat, particularly in the thrush.

P. 15.—Take of Barley Water, 6 ounces.
Honey of Roses, half an ounce.
Alum, one drachm.
Sulphuric Acid, thirty drops.
Mix them for a gargle.

P. 16.—Take of thin Starch, ten ounces.
Mutton Suet, dissolved therein, half an ounce.
Tincture of Opium, forty to fifty drops.
Mix them for a clyster, to be administered twice or thrice a day in cases of severe purgings, or the flux.

P. 17.—Take of the Sulphate of Zinc, half a drachm.
Rose Water, three ounces.
Common Water, three ounces.
Mix them. This may be used either as an eye-water in inflammation of the eyes, or as an injection in cases of the whites or clap.

P. 18.—Take of the Acetate of Lead, ten grains.
Alum, one drachm.
Common Water, three ounces.
Rose Water, three ounces.
Mix them. To be used three or four times a day in similar cases with the former, as likewise as a lotion in the bleeding piles when the hemorrhage is profuse.

P. 19.—Take of Rose Water, 5 ounces.
Alum, one drachm.
Sulphate of Zinc, one scruple.
Mix them. To be used in similar cases as the former.

P. 20.—Take of the Decoction of Oak Bark, eight ounces.
Alum, one drachm and a half.
Mix them. This injection may be used, as likewise the succeeding one, two or three times a day in the whites or bleeding piles.

P. 21.—Take of Lime Water, 4 ounces.
Common Water, four ounces.
Alum, two drachms.
Mix them for an injection.

BALSAMICS

Are substances of a smooth and oily consistence, which possess emollient, sweet, and generally aromatic qualities.

P. 1.—Take of Balsam Copaiba, 1 drm.
The Yoke of an Egg, or
Mucilage of Gum Acacia, 1 ounce.
Rub them in a marble or a stone mortar until they are well mixed; then gradually add
Pure Water, five ounces.
Syrup of Marsh-mallows, half an ounce.
Mix them. The dose may be two table-spoonsful three or four times a day in cases of gleet, whites, piles, or diseases of the kidneys.

P. 2.—Take of Balsam of Copaiba, from ten to thirty drops for a dose twice or thrice a day, on a bit of white sugar.
This medicine acts on the urinary passages, and may be given in gleet and the whites. In large doses it proves purgative, and is useful in cases of piles.

P. 3.—Take of Balsam of Peru, 1 scruple.
Mucilage of Gum Acacia, half an ounce.
Pennyroyal Water, one ounce.
Common Syrup, one drachm.
Mix them. This draught may be given twice or thrice a day in chronic asthma, gleet, and the whites.

P. 4.—Take of Balsam of Tolu, 1 drm.
Mucilage of Gum Acacia, one ounce.
Mix them well together in a stone mortar, and gradually add
Mint Water, five ounces.
Compound Tincture of Camphor, half an ounce.
The dose of this mixture may be two dessert-spoonsful three or four times a day in coughs, chronic asthma, &c., the Medicine being an Expectorant.

CARMINATIVES

Are Medicines which dispel Flatulencies of the Stomach and Intestines, and allay Pain therein.

P. 1.—Take of Mucilage of Gum Acacia, half an ounce.
Oil of Aniseed, twenty drops.
Rub them well together in a stone mortar, then gradually add
Peppermint Water, five ounces.
Compound Spirits of Lavender, one drachm.
Mix them.—The dose may be two dessert-spoonsful occasionally when distressed with flatulency in the stomach or bowels.

P. 2.—Take of Cinnamon Water, four ounces.
Spirit of Carraway or Aniseed, one ounce.
Tincture of Cardamoms, three drachms.
Aromatic Ammoniated Spirit, one drachm.
Mix them.—The dose to be the same as the former, and to be given in similar cases.

P. 3.—Take Dill Water, one ounce.
Spirit of Aniseed, two drachms.
Tincture of Cinnamon, one drm.
Powder of Ginger, ten grains.
Mix them for a draught, to be taken occasionally as may be judged necessary.

P. 4.—Take of prepared Chalk, ten grains.
Aromatic Powder, eight grains.
Cinnamon Water, six drachms.
Peppermint Water, six drachms.
Common Syrup, two drachms.
Mix them for a draught, to be given twice or thrice a day as the occasion may require.

P. 5.—Take of Syrup of Ginger, 2 drms.
Oil of Carraways, 5 drops.
Rub them togother in a mortar, then add gradually
Pimento Water, ten drachms.
Compound Tincture of Cardamoms, one drachm.
Mix them for a draught, to be given two or three times a day.

P. 6.—Take of Prepared Chalk, 12 grs.
Powder of Capsicum, 2 grains.
Spirituous Cinnamon Water, two drachms.
Common Water, eleven drachms.
Compound Spirits of Lavender, ten drops.
Mix them for a draught, which may be given as the former one.

P. 7.—Take of Aromatic Powder, four grains.
Magnesia, half a drachm.
Powder of Aniseed, five grains.
Mix them, and let this dose be given once or twice in the twenty-four hours.

P. 8.—Take of Powdered Ginger, eight grains.
Carraway Seeds, in powder, six grains.
Prepared Chalk, ten grains.
Mix them, and give this powder morning and evening.

P. 9.—Take of Bruised Aniseed, half an ounce.
Chamomile Flowers, half an ounce.
Boil them slowly in
Common Water, one Pint and a half until reduced to one Pint, then add
Oil of Turpentine, one drachm.
Mix them for a clyster.

DETERGENTS

Are Applications which possess the Property of cleansing Foul Ulcers.

P. 1.—Take of Honey of Roses, 1 ounce,
Dissolve it in
Barley Water, 6 ounces, and add
Diluted Sulphuric Acid, 30 drops.
Tincture of Myrrh, half an ounce.
Mix them for a gargle to be used frequently.

P. 2.—Take Compound Infusion of Red Roses, six ounces.
Diluted Sulphuric Acid, thirty to forty drops.
Honey of Borax, half an ounce.
Mix them for a gargle.

P. 3.—Take Compound Infusion of Red Roses, five ounces.
Diluted Sulphuric Acid, thirty to sixty drops.
Barley Water, three ounces.
Mix them for a gargle.

P. 4.—Take Honey of Roses, one ounce and a half.
Muriatic Acid, two drachms.
Mix them.—In the putrid or malignant sore throat, the ulcerations may be touched with a little of this on a Camel's hair pencil from time to time after gargling.

DEOBSTRUENTS

Are Medicines which are exhibited with the view of removing any Obstruction.

P. 1.—Take of Decoction of Dandelion, five ounces.
Tincture of Senna, one ounce.
Subcarbonate of Potass, 2 drms.
Mix them, and let the dose be two tablespoonsful twice a day.

P. 2.—Take of Myrh, one drachm.
Spirit of Cinnamon, half an ounce.
Dissolve the former with the latter in a mortar, then add
Pure Water, six ounces.
Subcarbonate of Potass, half a drachm.
Sulphate of Iron, fifteen grains.
Common Syrup, two drachms.
Mix them well, and divide the whole into four draughts, one of which may be taken three times a day.

P. 3.—Take of Decoction of Peruvian Bark, ten drachms.

Tincture of Cascarilla, two drms.
Powder of Rhubarb, five grains.
Sulphate of Magnesia, one drm. and a half.
Mix them for a draught, to be taken morning and evening.

P. 4.—Take of the Pills of Iron and Myrrh, two drachms.
Divide the mass into xxiv. pills, of which two may be given morning and night in cases of obstructed menstruation.

P. 5.—Take of Tincture of Castor, three drachms.
——————— Black Hellebore, three drachms.
Compound Tincture of Aloes, half an ounce.
Mix them, and take thirty drops, thrice a day in similar cases as the former Prescription.

P. 6.—Take Tartrate of Potass, half a drachm.
Powdered Rhubarb, four grains.
Submuriate of Mercury, (Calomel,) two grains.
Mix them, and let this powder be taken every other or third morning.

P. 7.—Take Submuriate of Mercury, twelve grains.
Confection of Roses, half a drm.
Mix them, and form twelve pills out of the mass, of which one may be given morning and night.

P. 8.—Take of the Quicksilver Pill, one drachm.
Extract of Hemlock, half a drm.
Common Syrup, a sufficiency to
Form the mass, then divide it into twenty four pills, one of which may be taken three or four times a day.

P. 9.—Take of Carbonate of Soda, two drachms.
Decoction of Bark, five ounces.
Tincture of the same, half an ounce.
——————— Calumba, two drachms.
Mix them. Give two large spoonsful three or four times a day.

P. 10.—Take of Carbonate of Soda, two drachms.
Powder of Peruvian Bark, 1 ounce.
Electuary of Senna, half an ounce.
Common Syrup, a sufficiency to
Form an electuary of a soft consistence, whereof the bulk of a large nutmeg may be taken morning and night.

P. 11.—Take of the Aloetic Pill with Soap, one drachm.
Divide the mass into 12 Pills, and give two at bed-time.
Take of the Quicksilver or Blue Pill, one drachm.
Divide the mass into 12 pills, and take one every third night, carrying it off the ensuing morning with a laxative draught. See Purgatives.

P. 12.—Take of Extract of Hemlock, one drachm.
Extract of Gentian, half a scruple.
Calomel, twelve grains.
Common Syrup, a sufficiency to
Form the mass, which divide into twenty pills, of which take from one to two morning and night.

P. 13.—Take of Iodine, one drachm.
Dissolve it in a Glass mortar with
Rectified Spirit, two ounces.
Of this Tincture, the dose for an Adult may be from twelve to twenty drops twice or thrice a day, in a little Cinnamon Water.

P. 14.—Take Compound Soap Liniment, one ounce,
Tincture of Iodine, one drachm.
Mix them well, and let the swelling be rubbed every night and morning with a little of this Liniment.

P. 15.—Take of Iodine, half a drachm.
Prepared Lard, one ounce.
Let them be well mixed, and rub the swellings night and morning with a little of the ointment.

DIURETICS

Are Medicines or Substances which, when taken internally, augment the flow of Urine from the Kidneys and Bladder.

P. 1.—Take of Supertartrate of Potass, two drachms.
Powder of Squill, one grain.
——————— Ginger, five grains.
Mix them, and take the Powder morning and evening, dissolved in a tea-cupful of an infusion of juniper berries, or a decoction of green broom.

P. 2.—Take Powder of Squill, one grain.
——————— Foxglove, 1 grain.
——————— Supertartrate of Potass, one drachm.
Mix them, and take this dose morning and evening in the same vehicle as the former.

P. 3.—Take Aromatic Powder, 5 grains.
Powder of Wild Cucumber, half a grain.
Supertartrate of Potass, 1 drm.
Mix them, and take the powder morning and night, mixed in a strong infusion of horse-radish or green broom.

P. 4.—Take Nitrate of Potass, 1 scruple.
Powder of Squill, one grain.

Powder of Ginger, 5 grains.
Mix them, and give this twice a day.

P. 5.—Take of Purple Foxglove leaves dried, and powdered, 1 drachm.
Boiling Water, half a pint.
Macerate for four hours in a covered vessel, then strain off the liquor, and add
Acetate of Potass, one drachm.
Spirit of Cinnamon, half a fluid-ounce.
The proper dose of this medicine will be from half an ounce to one ounce twice a day, lessening the quantity if it affects the pulse, stomach, or bowels, but continuing its use if it does not, until it procures an increased discharge of urine.

Or,

P. 6.—Take of Purple Foxglove leaves, dried, one drachm.
Common Water, one pint.
Boil them slowly until the liquor is reduced to about eight ounces, then remove it, and strain it, adding
Compound Tincture of Cardamoms, one ounce.
The proper dose is from two to three drachms every six hours, until its diuretic effects are sufficient.

P. 7.—Take Common Broom, fresh and green, four ounces.
Pure Water, one quart.
Boil them over a slow fire until the liquor is reduced to one pint, then pour it off and strain it. A tea-cupful may be taken twice or thrice a day.

P. 8.—Take Juniper Berries, half an ounce.
Mustard Seed, half an ounce, and
Horse-radish, all bruised, half an ounce.
Broom Ashes, four ounces.
Boiling Water, one quart.
Infuse them for two days, then strain off the liquor, of which a tea-cupful may be taken three times a day with other diuretic medicines.

DIAPHORETICS

Are Medicines which, from being taken internally, moderately increase the discharge from the skin or perspiration.

P. 1.—Take Antimonial Powder, three grs.
Confection of Roses, a sufficiency to form a Pill, which is to be given every four hours, drinking freely of some tepid liquor at the same time.

P. 2.—Take Compound Powder of Ipecacuanha, from ten to twelve grains, every night on going to bed, mixed in a tea-cupful of warm gruel or whey, in chronic rheumatism.

P. 3.—Take Antimonial Powder, three grs.
Submurate of Mercury, 1 grain.
Opium, half a grain.
Syrup, a sufficiency to form them into a Pill, which may be taken at bed-time in cases of chronic rhematism and nocturnal pains.

P. 4.—Take Camphor, five grains.
Antimonial Powder, three grains.
Subcarbonate of Ammonia, five grains.
Confection of Roses, a sufficiency to form a small Bolus, which is to be taken every four or six hours, washing it down with 3 table-spoonsful of the common saline mixture. See P. 5.

P. 5.—Take Lemon Juice, one ounce.
Subcarbonate of Potass, about one has drachm.
Stir them well, and when the effervescence has ceased, add
Common Water, six ounces.
Mint Water, one ounce.
Syrup, half an ounce.
Mix them. This is the common saline mixture, three table-spoonsful of which for a dose frequently repeated will sometimes excite a gentle perspiration.

P. 6.—Take of the above Saline Mixture, six ounces.
Wine of Tartarized Antimony, thirty drops, or the
Tartarized Antimony in Substance, one grain and a half.
And add Camphor Mixture, two oz.
Mix them, and give two table-spoonsful every three or four hours in febrile complaints.

P. 7.—Take Solution of the Acetate of Ammonia, two ounces.
Mint Water, two ounces and a half.
Common Water, two ounces and a half.
Tartarized Antimony, two grains.
Syrup, half an ounce.
Mix them. The dose should be two dessert-spoonsful every four or six hours, in catarrhal affections and fever.

P. 8.—Take Camphorated Mixture, three ounces.
Common Saline Mixture, (see P. 5) three ounces.
Nitrate of Potass, half a drachm.
Wine of Tartarized Antimony, thirty drops.
Mix them. The dose may be two table-spoonsful every four hours.

P. 9.—Take Acetate of Ammonia, three drachms.
Camphor Mixture, one ounce and a half.

Wine of Tartarized Antimony, twelve drops.
Common Syrup, one drachm.
Mix them as a draught, to be taken every four or six hours.

P. 10.—Take Lemon Juice, one ounce.
Subcarbonate of Ammonia, two scruples.
Mix them, and when the effervescence has ceased, add
Common Water, two ounces.
Common Syrup, two drachms.
Camphor Mixture, three ounces.
The dose may be two table-spoonsful every four or six hours.

P. 11.—Take Camphorated Mixture, five oz.
Prepared Ammonia, 12 grains.
Infusion of Gentian, half an ounce.
Syrup of Tolu, three drachms.
Mix them. Two dessert-spoonsful to be taken three or four times a day.

DISCUTIENTS

Are those Substances or Remedies which possess a power of repelling or resolving Tumours.

P. 1.—Take Solution of the Acetate of Ammonia, two ounces.
Camphorated Spirit, one ounce.
Common Water, three ounces.
Mix them. Linen cloths wetted in this are to be kept on inflamed parts.

P. 2.—Take Muriate of Ammonia, two drachms; dissolve it in
Common Vinegar, two ounces,
Then add Rectified Spirit, 1 ounce.
Common Water, one ounce and a half.
Solution of Acetate of Lead, one drm.
Mix them. Use this wash in the same manner as the former.

P. 3.—Take Solution of the Subacetate of Lead, one drachm.
Common Water, five ounces.
Rose Water, five ounces.
Mix them, and use the wash as directed in P. 1.

P. 4.—Take Soap Liniment, two ounces.
Solution of the Acetate of Ammonia, two ounces.
Ammoniated Aromatic Spirit, three drachms.
Mix them. Swelled or indurated glands may be rubbed with a little of this Liniment twice or thrice a day.

P. 5.—Take Camphorated Spirit, one ounce.
Soap Liniment, one ounce.
Solution of Subacetate of Lead, half a drachm.
Mix them. This liniment to be used as the former.

P. 6.—Take Camphorated Spirit, three drms.
Solution of Subacetate of Lead, one drachm.
Distilled or Common Water, one pint.
Mix them. This forms an excellent lotion for a topical application on inflamed surfaces, particularly where an intermixture of erysipelas is suspected.

P. 7.—Take Plaster of Ammoniac, 1 ounce.
——— Mercury, one ounce.
——— Cummin Seeds, one ounce. And add
Camphor, two drachms.
Melt them together, and spread them on leather, which apply to the region of the liver when there is an enlargement of this organ.

EMETICS

Are Medicines which, when received into the Stomach in a sound state, are capable of exciting vomiting.

The following are to be considered as of a mild nature.

P. 1.—Take Powder of Ipecacuanha, one scruple.
This Emetic may be mixed with an ounce of Mint Water in the form of a draught, or be taken in common water.

P. 2.—Take Wine of Ipecacuanha, one oz.
Wine of Tartarized Antimony, thirty drops.
Mix them.

P. 3.—Take Oxymel of Squills, half an oz.
Wine of Ipecacuanha, half an ounce.
Mix them.

P. 4.—Take Powder of Ipecacuanha, fifteen grains.
Tartarized Antimony, one grain.
Common Water, ten drachms.
Mix them.

P. 5.—Take Tartarized Antimony, three grs.
Pure Water, five ounces.
Oxymel of Squill, half an ounce.
Mix them. Give two table-spoonsful every quarter of an hour, until the patient vomits.

P. 6.—Take Powder of Ipecacuanha, ten grs.
Sulphate of Copper, three grains.
Mix them.—This Emetic has been recommended in pulmonary consumption; and may also be given in cases of swelled testicle.

The following are of a very active nature; and may be administered in cases of any

mineral or vegetable Poison being swallowed.

P. 7.—Take Sulphate of Zinc, from ten grs. to one drachm, and dissolve it in
Pure Water, one ounce and a half.

P. 8.—Take Tartarized Antimony, one gr. and a half.
Sulphate of Zinc, from ten grains to one drachm.
Pure Water, two ounces.
Mix them.—Give the half instantly, and the remainder in a quarter of an hour if vomiting is not previously excited. Where the person is in a state of stupor and incapable of swallowing, the emetic should be conveyed into the stomach by means of an elastic gum catheter, through which it can be injected with a common syringe or vegetable bottle having a small pipe affixed to it.

EMOLLIENTS

Are those Substances which possess a Power of relaxing the living animal Fibre without producing that effect from any mechanical action.

P. 1.—Take Barley Water or thin Gruel, one pint.
Juice of Lemon or Orange, a sufficiency to make it of a grateful acidity.
Use this for common drink.

P. 2.—Take Marsh-mallows dried, one oz.
Chamomile Flowers, half an ounce.
Pure Water, one pint.
Boil for fifteen minutes, then strain off the liquor, which may be used either as a clyster or fomentation, or both.

P. 3.—Take thin Gruel, eleven ounces.
Common Salt, two drachms.
Castor Oil, one ounce.
Mix them for a Clyster.

P. 4.—Take the Heads of Poppies, three oz.
Marsh-mallow Leaves dried, two oz.
Pure Water, two quarts.
Boil them, for half an hour, then strain off the liquor, and use it for a fomentation.

P. 5.—Take the Common Bread and Milk Poultice, softened with a little lard or sweet oil.
This may be used as an Emollient Poultice in inflammatory tumours.

EMMENAGOGUES

Are such Medicines as possess a power of promoting that Monthly Discharge of Blood by the Womb, which should take place in certain conditions of the female system.

P. 1.—Take Aloetic Pills with Myrrh, half a drachm.
Compound Galbanum Pills, 1 drm.
Syrup, a sufficiency to form a mass.
Divide this into twenty-four pills, of which give 2 every night at bed-time.

P. 2.—Take Pills of Iron and Myrrh, one drachm.
Aloes in powder, one scruple.
Extract of Peruvian Bark, ten grains.
Syrup, as much as will be sufficient to form the mass, which is to be divided into 20 pills, whereof two may be taken at night and one in the morning, washing them down with some Tonic Medicine in a liquid form. See the Class of Tonics.

P. 3.—Take Subcarbonate of Iron, half a drachm
Myrrh in Powder, one drachm.
Shavings of Soap, one scruple.
Extract of Black Hellebore, fifteen grs.
Syrup, a sufficiency to form the mass into Pills of a common size, and give two morning and night.

P. 4.—Take Ammoniated Iron, half a drm.
Myrrh in powder, one drachm.
Aloes, powdered, one scruple.
Extract of Gentian, ten grains.
Syrup, a sufficiency.
Mix them, and divide the mass into Pills of five grains each, taking two morning and night.

P. 5.—Take Peruvian Bark in Powder, half an ounce.
Myrrh, powdered, two drachms.
Subcarbonate of Iron, one drachm.
Jalap, in powder, one scruple.
Syrup, a sufficiency to form an Electuary, of which the bulk of a nutmeg may be taken morning and night.

P. 6.—Take Compound Tincture of Aloes, half an ounce.
Tincture of Myrrh, half an ounce.
——— Bark, one ounce.
——— Black Hellebore, two drms.
Mix them. The dose may be a tea-spoonful every morning and night.

EXPECTORANTS

Are Medicines employed to increase the Discharge of Mucus from the Lungs.

P. 1.—Take Sweet Almonds, blanched, half an ounce, bruise them well, and then add
White Sugar, two drachms.
Gum Acacia in powder, one drachm.
Rub these well together in a stone mortar, and gradually add
Pure Water, six ounces.
Oxymel of Squills, 3 drachms.
Mix them. Of this Pectoral Mixture the patient may take a table-spoonful every now and then when the cough is troublesome.

P. 2.—Take Gum Ammoniac, 1 drm.
Dissolve it in
Common Water, 5 ozs., and add
Pennyroyal Water, one ounce.
Vinegar of Squills, 3 drachms.
Wine of Tartarized Antimony, thirty drops.
Syrup of Tolu, half an ounce.
Mix them. About a table-spoonful or small mouthful may be taken from time to time to promote expectoration, to assist which the vapours arising from warm water with a little vinegar added to it, may be inhaled from the spout of a tea-pot or through a funnel inverted over a basin filled with the fluid.

P. 3.—Take Mucilage of Gum Acacia, three ounces.
Pennyroyal Water, four ounces.
Syrup of Lemons, half an ounce.
Spirit of Nitric Æther, one drm.
Wine of Tartarized Antimony, thirty drops.
Mix them. To be taken as the two former mixtures.

P. 4.—Take Spermaceti, two drachms.
Rub it very fine in a stone mortar, which has been previously heated, then add one half of the Yolk of an Egg.
Triturate them well together, so as to mix them perfectly, then add
Common Water, five ounces.
Pennyroyal Water, one ounce.
Nitrate of Potass, half a drachm.
Syrup of Tolu, half an ounce.
Wine of Tartarized Antimony, thirty drops.
Mix them. To be taken in the same dose as P. 1 and 2.

P. 5.—Take Barley Water, one pint.
Gum Acacia in powder, 1 ounce.
Lemon Juice, one ounce.
Honey or Sugar, half an ounce.
Mix them. This is a good pectoral drink, and may be taken freely.

P. 6.—Take Honey, clarified, 1 ounce.
Juice of Lemons, one ounce and a half.
Syrup of Tolu, half an ounce.
Mix them. Of this linctus let the patient take a tea-spoonful frequently.

P. 7. Take Confection of Roses, three drms.
Syrup of Tolu, one ounce.
——— Poppies, half an ounce.
Diluted Sulphuric Acid, 1 drm.
Mix them. The dose of this linctus is to be the same as the former.

P. 8.—Take Compound Squill Pills, two drachms.
Divide the mass into twenty-four Pills, and of these from one to two may be taken thrice a day.

LAXATIVES

Are Medicines which gently open the Bowels.

P. 1.—Take Magnesia, half a drachm.
Powdered Rhubarb, fifteen grains.
Mix them. This Aperient Powder is to be given as the occasion may require.

P. 2.—Take Rhubarb, in powder, fifteen grs.
Submuriate of Mercury, (Calomel) two grains.
Mix them.

P. 3.—Take Powdered Jalap, one scruple.
Submuriate of Mercury, 3 to 5 grains.
Mix them.

P. 4.—Take Tartrate of Potass, one drachm.
Powdered Rhubarb, twelve grains.
Mix them.

P. 5.—Take Sulphate of Soda, one ounce, dissolved in any tepid liquor.

P. 6.—Take Sulphate of Magnesia, 3 drms.
Supertartrate of Potass, one drachm.
Dissolve them in a little warm gruel or water for a dose.

P. 7.—Take Aloes in powder, half a drm.
Rhubarb in the same, half a drachm.
Common Soap sliced, ten grains.
Syrup of Buckthorn, a sufficiency to form the mass, which divide into Pills of five grains each, giving from two to three for a dose.

P. 8.—Take Aloetic Pills with Myrrh, two drachms.
Divide the mass into twenty-four pills, of which from two to three may be given at bed-time in cases of obstructed menstruation, &c.

P. 9.—Take Submuriate of Mercury (Calomel) twelve grains.
Compound Extract of Colocynth, one drachm and a half.
Oil of Carraway, six drops.
Syrup of Ginger, a sufficiency to form the mass, which divide into twenty-four pills.
The dose may be two, which, if not found to act in due time, may be assisted by another pill, and the administration of a Laxative Clyster. See P. 16.

P. 10.—Take Confection of Senna, one ounce,
Powdered Jalap, half a drachm.
Supertartrate of Potass, two drachms.
Common Syrup, a sufficiency to form an Electuary, of which the bulk of a nutmeg is to be taken at night, and if necessary, the same quantity the next morning.

P. 11.—Take Compound Infusion of Senna, five ounces.
Compound Tincture of the same, half an ounce.
Sulphate of Magnesia, six drachms.

Mix them. A third of this may be given for a dose, which is to be repeated in three hours if the bowels are not then sufficiently opened.

P. 12.—Take Sulphate of Magnesia, one ounce.
Peppermint Water, two ounces.
Common Water, three ounces.
Tincture of Rhubarb, half an ounce.
Mix them. Four table-spoonsful are to be given for a dose, and if necessary, this is to be repeated in three or four hours.

P. 13.—Take the Pulp of Preserved Tamarinds, two ounces.
Warm Water, six ounces.
Mix them, strain off the liquor, and add
Tartrate of Potass, half an ounce.
Manna, one ounce.
Give the half for a dose, and if requisite, the remainder after some hours.

P. 14.—Take Washed Sulphur, half an ounce.
Supertartrate of Potass, two drachms.
Confection of Senna, one ounce.
Common Syrup or Treacle, a sufficiency to form them into an Electuary, of which the bulk of a nutmeg may be taken morning and night in cases of piles.

P. 15.—Take Castor Oil, six drachms to one ounce.

P. 16.—Take Compound Infusion of Senna, eleven ounces.
Sulphate of Soda, one ounce.
Castor Oil, half an ounce.
Mix them for a Clyster, which may be administered when the bowels are confined, or not sufficiently acted upon by aperient medicines taken by the mouth.

LITHONTRIPTICS

Are Medicines or Substances supposed to possess a power of dissolving Stony Concretions in the Urinary Passages, or at least of removing a disposition in the human body to the formation of Stones.

P. 1.—Take Magnesia, half a drachm every night and morning.

P. 2.—Take Carbonate of Soda, from one scruple to half a drachm, twice or thrice a day.

P. 3.—Take Soap Pills, ten grains every night and morning.

P. 4.—Take Aerated Potass, from one to two drachms twice a day, dissolved in a tumbler of pure water.

P. 5.—Take Soda Water, half a pint twice or thrice a day.

P. 6.—Take Lime Water, half a pint night and morning, mixed with a little milk.

P. 7.—Take Solution of Potass, twenty-five to forty drops thrice a day in a tea-cupful of barley water or veal broth.

NARCOTICS,

Medicines which stupify and allay Pain.

P. 1.—Take Extract of Hemlock, half a drm.
Extract of Henbane, half a drachm.
Mix them, and divide the mass into twelve Pills, of which one may be taken morning and night.

P. 2.—Take Extract of Stramonium, (common thorn apple), six grains.
Extract of Liquorice, 2 scruples.
Syrup, a sufficiency.
Mix them well together, and divide the mass into twelve Pills, one of which may be taken three times a day in cases of painful menstruation.

P. 3.—Take Opium, one grain.
Extract of Henbane, three grains.
Syrup, a sufficiency to form these into a pill, which may be taken at bed-time, and if necessary be repeated in the morning in cases of continual pain.

P. 4.—Take Tincture of Opium, from thirty to fifty drops in any liquid.

P. 5.—Take from five to ten drops of the Opiate, known under the name of the Black Drop.

☞ *For other Narcotics, see the Class of Anodynes.*

PURGATIVES

Are Medicines which act with energy on the Intestines, and remove Feculent Matter contained therein.

Any of the following may be considered of a mild nature, as well as those in the Class of Laxatives.

P. 1.—Take Jalap, in powder, one scruple to half a drachm.
Submuriate of Mercury (Calomel) five grains.
Mix them in thick syrup or honey, and wash the whole down with a little thin gruel.

P. 2.—Take Rhubarb, in powder, half a drm.
Submuriate of Mercury, 4 grains.
Mix them, and give them in the same manner as the former.

P. 3.—Take Submuriate of Mercury, five grains.
Extract of Colocynth, ten grains.
Syrup of Buckthorn, as much as will form the whole into a mass, which is to be divided into 3 pills, to be taken for a dose.

P. 4.—Take Compound Infusion of Senna, 1 ounce and a half.
Tincture of Jalap, one drachm.
Sulphate of Magnesia, three drachms.
Syrup of Buckthorn, two drachms.
Mix them for a Purgative Draught.

P. 5.—Take Compound Infusion of Senna, eleven ounces.
Sulphate of Soda, six drachms.
Castor Oil, one ounce.
Mix them for a Purgative Clyster.

P. 6.—Take Extract of Colocynth, half a drachm.
Infusion of Senna, eleven ounces.
Sulphate of Soda, one ounce.
Castor Oil, six drachms.
Mix them, and let this Purgative Clyster be administered as the occasion may require.

P. 7.—Take of thin Gruel, eleven ounces.
Sulphate of Soda, one ounce.
Oil of Turpentine, half an ounce.
Mix them for a Clyster, and let it be repeated in three hours if necessary.

DRASTIC PURGATIVES.

The following are to be considered as of a very active Nature.

P. 1.—Take Gum Scammony in powder, from five to ten grains.
White Sugar, ten grains.
Rub them well together, and give the powder mixed in a little tepid gruel.

P. 2.—Take Supertartrate of Potass, half a drachm.
Gum Scammony, twelve grains.
Powdered Ginger, ten grains.
Mix them well for a dose.

P. 3.—Take Submuriate of Mercury, five grains.
Gum Scammony, ten grains.
White Sugar, twelve grains.
Mix them.

P. 4.—Take Wild Cucumber dried and pounded, from 1 to 2 grains.
Supertartrate of Potass, half a drachm.
Aromatic Powder, ten grains.
Mix them well together.

P. 5.—Take Extract of Wild Cucumber, two to three grains, made into a Pill.

P. 6.—Take Croton Oil in the dose of from one to two drops, on a bit of White Sugar.

REFRIGERANTS

Are Medicines and Applications of a cooling refreshing Nature, which abate febrile heat.

P. 1.—Take Pure Water, cold, 3 ounces.
Rectified Spirit, half an ounce.
Solution of Subacetate of Lead, thirty drops.
Mix them. To be used as a refrigerant application in inflammatory eruptions or sores.

P. 2.—Take Common Vinegar, half a pint.
Pure Water, one pint and a half.
Mix them. In typhus and other febrile diseases, where we want to abstract heat, a piece of sponge dipped in this wash and passed over different parts of the body, will prove both comfortable and refrigerating.

P. 3.—Take Compound Infusion of Roses, 5 ounces.
Nitrate of Potass, half a drachm.
Tincture of Opium, twenty drops.
Mix them, and let the dose be two tablespoonsful every third or fourth hour.

P. 4.—Take Pure Water, four ounces.
Syrup of Roses, half an ounce.
Diluted Sulphuric Acid, sixty drops.
Nitrate of Potass, half a drachm.
Mix them. The dose to be the same as the former.

P. 5.—Take Saline Mixture, (See Diaphoretics, P. 5.) six ounces.
Nitrate of Potass, half a drachm.
Mix them. Let two table-spoonsful be given every four or six hours.

P. 6.—Take Supertartrate of Potass, three drachms.
Nitrate of ditto, two drachms.
Mix them, and divide them into eight doses, one of which may be given every four hours dissolved in a tea-cupful of cool barley water.

SEDATIVES.

Medicines which have the Power of diminishing the Energy of the Body without destroying Life, as also Applications which relieve and ease Pain. See also Anodynes and Narcotics.

P. 1.—Take Extract of Henbane, fifteen grains.
Dissolve it in
Camphor Mixture, six ounces.

Adding
Compound Spirit of Sulphuric Æther, one drachm.
Mix them. Two table-spoonsful of this mixture may be given twice or thrice a day in those cases where opium cannot be administered, owing to its being attended with an injurious effect.

P. 2.—Take Extract of Hemlock, forty-eight grains.
Divide the mass into 12 pills, of which from one to two may be taken morning and night, washed down with two table-spoonsful of camphor mixture.

P. 3.—Take Rose Water, six ounces.
Solution of the Subacetate of Lead, twenty drops.
Wine of Opium, thirty drops.
Mix them for a wash, to be used in inflammation of the eye or eye-lids.

P. 4.—Take of an Infusion of Green Tea, five ounces.
Solution of the Subacetate of Lead, fifteen drops.
Mix them. This injection may be used five or six times a day, in the first stage of gonorrhœa or clap.

P. 5.—Take Mucilage of Gum Acacia, two ounces.
Olive Oil, one ounce.
Mix well together in a mortar, and add very gradually
Common Water, five ounces.
Vinous Tincture of Opium, fifty drops.
Mix them well, and let this injection be used several times a day in the incipient stage of a clap.

P. 6.—Take Solution of the Acetate of Ammonia, half an ounce.
Pure Water, six ounces.
Vinous Tincture of Opium, forty drops.
Solution of the Subacetate of Lead, twenty drops.
Mix them for an injection in the early stage of gonorrhœa.

STIMULANTS.

Medicines which possess a Power of exciting the Animal Energy.

P. 1.—Take Camphor Mixture 3 ozs.
Pimento Water, 3 ounces.
Ammoniated Tincture of Valerian, two drachms.
Compound Tincture of Cardamoms, half an ounce.
Mix them, and give two table-spoonsful every four or six hours.

P. 2.—Take Compound Spirit of Horse-radish, two ounces.
Cinnamon Water, three ounces.
Fetid Spirit of Ammonia, three drms.
Tincture of Valerian, 2 drachms.
Mix them. The dose to be the same as the former.

P. 3.—Take Ammonia, six grains.
Camphor Mixture, one ounce and a half.
Spirit of Sulphuric Æther, thirty drops.
Mix them as a draught to be taken every four or six hours.

P. 4.—Take Pimento Water, ten drms.
Ammoniated Tinct of Guaiacum, one drachm.
Tincture of Valerian, 1 drachm and a half.
Mix them as a draught to be taken every six hours.

P. 5.—Take Camphor Mixture, 1 ounce.
Solution of Ammonia, from 20 to 30 drops.
Compound Spirits of Lavender, half a drachm.
Mix them as a draught to be given every four or six hours according to the urgency of the case.

P. 6.—Take flowers of Leopard's Bane, three drachms.
Boiling Water, twelve ounces.
Infuse them for an hour in a covered basin, then strain off the liquor, and add
Compound Tincture of Cardamoms, one ounce.
Mix them. Let the dose be three table-spoonsful thrice or four times a day in paralytic affections.

P. 7.—Take Camphorated Spirit, one ounce.
Solution of Ammonia, half an ounce.
Tincture of Spanish Fly, 2 drms.
Mix them, and use the liniment morning and night.

P. 8.—Take Compound Camphor Liniment.

P. 9.—Take Strong Liniment of Ammonia.

P. 10.—Take Turpentine Liniment.

P. 11.—Take Camphorated Spirit, ten drms.
Spirit of Sulphuric Æther, two drms.
Tincture of Spanish Fly, three drms.
Mix them, and rub the stomach and bowels morning and night with some of the liniment.

P. 12.—Take Bitter Almonds blanched, two ounces.
Bruise them in a stone mortar, and gradually add
Pure Water, one pint.
Strain off the liquor, and make an addition to it of
Oxymuriate of Mercury, from ten to twelve grains,
having previously dissolved it in
Rectified Spirit, half an ounce.
Mix them. This lotion is to be used twice a day in cases of pimpled or blotched face.

P. 13.—Take of Mustard Seed, powdered, half a pound.
Linseed Meal or Common Flour, half a pound.
Boiling Vinegar,
As much as is sufficient to form the whole of a proper consistence, and divide the mass into two cataplasms, to be applied to the soles of the feet.

STOMACHICS

Are Medicines which excite and strengthen the action and powers of the Stomach. See Tonics and Carminatives also.

P. 1.—Take Subcarbonate of Potass, one drm.
Common Water, five ounces.
Mint Water, one ounce.
Compound Tincture of Lavender, thirty drops.
Common Syrup, half an ounce.
Mix them, and give three table-spoonsful for a dose, the patient swallowing immediately afterwards a dessert-spoonful of fresh lemon juice.

P. 2.—Take the above medicines mixed together in a state of effervescence, by adding the Lemon Juice at the time of its being administered.

P. 3.—Take Peppermint Water, two ounces.
Compound Tincture of Cinnamon, half an ounce.
Tincture of Cardamoms, half an oz.
Camphor Mixture, three ounces.
Mix them. The dose may be two table-spoonsful every four or six hours.

P. 4.—Take Camphor Mixture, 5 ounces.
Sulphuric Æther, one drachm.
Prepared Ammonia, half a drachm.
Tincture of Opium, forty drops.
Mix them, and give two table-spoonsful every two or three hours in cases of gout affecting the stomach.

P. 5.—Take Camphor, four grains.
Musk, four grains.
Ammonia, four grains.
Make them into a bolus with a little syrup or confection of roses, and let this be taken every two hours.

STYPTICS,

Medicines or Substances which possess the power of stopping discharges of Blood.

P. 1.—Take of Alum, eight grains.
Acetate of Lead, one grain and a half.
Opium, half a grain.
Confection of Roses,
A sufficiency to form the whole into a mass, which divide into four pills, of which two may be given for a dose twice or thrice a day in cases of internal hemorrhage, washing them down with a wine-glassful of the unacidulated infusion of Roses, or take the same quantity of the acidulated infusion, omitting the Pills.

P. 2.—Take Sulphate of Copper, one drachm and a half.
Alum, half a drachm.
Pure Water, seven ounces.
Rectified Spirit, one ounce.
Mix them. Tents dipped in this, and applied to the mouth of a bleeding vessel, will probably stop the hemorrhage.

P. 3.—Take the Styptic of Ruspini.
This may be used externally as well as be taken inwardly in cases of active hemorrhage.

P. 4.—Take Alum reduced to Powder, two drachms.
Rose Water, five ounces.
Distilled Vinegar, one ounce.
Mix them, and use the wash as above.

P. 5.—Take of Sulphate of Zinc, 1 drachm.
Acetate of Lead, 1 scruple.
Rose Water, ten ounces.
Mix them for a wash or injection.

SUDORIFICS,

Medicines which cause or produce much Sweating, and that act with greater force than Diaphoretics, which occasion only a gentle Perspiration.

P. 1.—Take Subcarbonate of Ammonia, five to ten grains.
Camphor, five grains.
Antimonial powder, three grains,
Confection of Roses, a sufficiency to form a Bolus, which is to be given every four or six hours.

P. 2.—Take Gum Guaiacum, 1 scruple.
Subcarbonate of Ammonia, 10 grs.
Currant Jelly, a sufficiency to form a bolus, to be given morning and night in chronic rheumatism.

P. 3.—Take Antimonial Powder, 3 grs.
Gum Guaiacum, ten grains.
Confection of Roses, a sufficiency to form a bolus, to be given morning, noon, and night.

P. 4.—Take Compound Powder of Ipecacuanha, ten grains.
Gum Guaiacum, fifteen grains.
Form them into a Bolus with a little common syrup, to be given morning and night.

P. 5.—Take Ammoniated Tincture of Gua-

lacum, one drachm and a half, for a dose in milk or any viscid fluid, on going to bed at night.

P. 6.—Take Camphor Mixture, 10 drms.
Solution of the Acetate of Ammonia, two drachms.
Wine of Tartarized Antimony, twenty drops.
Ammoniated Tinct. of Guaiacum, one drachm.
Common Syrup, two drachms.
Mix them as a draught to be taken after getting into bed at night.

P. 7.—Take Decoction of Peruvian Bark, one ounce and a half.
Tincture of the same, one drachm.
Oil of Turpentine, twenty drops.
Wine of Tartarized Antimony, fifteen drops.
Mix them, and let this draught be given three times a day in rheumatic affections.

SUPPURATIVES,

Remedies which dispose Inflammatory Tumours to form proper Matter or Pus within them.

P. 1.—Take the Common Bread and Milk Poultice, with a little Olive Oil or Lard added to it.

Apply a fresh poultice every morning and night, previously fomenting the tumour with a flannel cloth wrung out in hot water, or a decoction of marsh-mallows and chamomile flowers.

P. 2.—Apply the Gum Plaster, or
That of Galbanum,
Spread on leather or thick linen of a sufficient size over the tumour.

TONICS,

Medicines which increase the tone of the muscular fibres, and thereby strengthen the whole body. Some of them belong to the vegetable class, and others to the mineral.

The Vegetable Tonics are the component parts of the following Prescriptions.

P. 1.—Take Peruvian Bark in coarse powder, one ounce.
Common Water, one pint,
Boil them for a quarter of an hour in a vessel slightly covered, and strain off the liquor while hot.

P. 2.—Take Peruvian Bark in coarse powder, half an ounce.
Boiling water, half a pint.
Macerate them for two hours, and then strain the liquor.

P. 3.—N. B. The Infusion of Angustura Bark,

P. 4.—And Infusion of Cascarilla Bark,
Are to be made in the same proportions as the former.

P. 5.—Take Calumba Root, sliced, one drm.
Orange Peel, two drachms.
Boiling Water, half a pint.
Macerate them for 2 hours, then strain.

P. 6.—Take Gentian Root bruised, one drm.
Orange Peel sliced, one drachm.
Fresh Lemon Peel, two drachms.
Boiling Water, twelve ounces.
Macerate them for two hours, then strain.

P. 7.—Take of the above Infusion, five ozs.
Tincture of Peruvian Bark, three drms.
——— Cardamoms, 3 drachms.
Mix them. From two to three large spoonsful may be taken twice or thrice daily, adding from fifteen to thirty drops of diluted sulphuric acid.

P. 8.—Take Decoction or Infusion of Peruvian Bark (See P. 1 and 2) six ozs.
Tincture of Calumba, two drachms.
——— Orange Peel, 3 drachms.
——— Snake Root, two drachms.
Mix them. The dose is to be three table-spoonsful thrice a day.

P. 9.—Take Decoction of Peruvian Bark (See P. 1.), seven ounces.
Powder of the same, three drachms.
Tincture of Cascarilla, half an ounce.
——— Cardamoms, half an ounce.
Diluted Sulphuric Acid, forty drops.
Mix them.—Two or three table-spoonsful three or four times a day will be a proper dose.

P. 10.—Take Infusion of Cascarilla Bark, (See P. 4) six ounces.
Tincture of Peruvian Bark, half an ounce.
——— Orange Peel, 2 drachms.
Mix them. Two table-spoonsful to be taken three times a day, with fifteen drops of diluted sulphuric acid.

P. 11.—Take Infusion of Angustura Bark, six ounces.
Compound Tincture of Cinnamon, three drachms.
Tincture of Gentian, three drachms.
Mix them.—The dose is to be two table-spoonsful, twice or thrice a day.

P. 12.—Take Infusion of Foxglove, (See Diuretics, P. 5.) one ounce.
Tincture of Cascarilla, half an ounce,
——— Cardamoms, half an ounce.
Peppermint Water, 5 ounces.
Acetate of Potash, one drachm.

Mix them. Two table-spoonsful of this diuretic and tonic medicine are to be given three times a day.

P. 13.—Take Infusion, &c. as in P. 7. of Tonics, five ounces.
——— of Foxglove, 1 ounce.
Mix them. The dose to be the same as in the former, that is, two table-spoonsful thrice a day.

P. 14.—Take Peruvian Bark in fine Powder, one drachm.
Aromatic Powder, ten grains.
Mix them. This powder to be taken every four or six hours.

The following Prescriptions consist of the Mineral or Metallic Tonics, conjoined with the Vegetable:

P. 15.—Take Diluted Sulphuric Acid, from fifteen to thirty drops for a dose, added to three large spoonsful of any of the Vegetable Tonics before prescribed.

P. 16.—Take Powder of Peruvian Bark, one scruple.
Subcarbonate of Iron, four grains.
Rhubarb in Powder, three grains.
Mix them. This Powder may be given night and morning.

P. 17.—Take Oxyd of Zinc, two to three grains.
Aromatic Powder, five grains.
Gentian in Powder, 12 grains.
Mix them, and take this Powder twice in the twenty-four hours.

P. 18.—Take Oxyd of Zinc, six grains.
Extract of Bark, four grains.
Syrup of Ginger, a sufficiency to form the mass, which divide into two pills, to be taken three times a day, with two ounces of an Infusion of Angustura Bark, Calumba Root, or Cascarilla. See P. 3, 4, and 5, of Tonics.

P. 19.—Take Pills of Myrrh with Iron, ten grains, made into two Pills, washing them down with three table-spoonsful of the Mixture 8. The dose to be repeated night and morning.

P. 20.—Take Subcarbonate of Iron, half a drachm.
Myrrh, in powder, half a drachm.
Extract of Gentian, or of
Peruvian Bark, one scruple.
Syrup, a sufficiency.
Mix them well, divide the mass into thirty pills, and let two be taken night and morning, washing them down with three table-spoonsful of Mixture 5 of this Class.

P. 21.—Take Ammoniated Iron, two grains.
Confection of Roses, five grains.
Form them into a pill to be taken thrice a day, washed down with three table-spoonsful of a decoction of bark, as in P. 1. of Tonics.

P. 22.—Take Ammoniated Tincture of Iron, from twenty to thirty drops, twice or thrice a day in a wine-glassful of cold water.

P. 23.—Take Sulphate of Copper, two grs.
Opium, two grains.
Confection of Roses, one drachm.
Mix the whole well together, and divide the mass into pills of five grains each, whereof from one to two must be taken twice or thrice a day.

P. 24.—Take Decoction of Bark (See P. 1) ten drachms.
Tincture of the same, 1 drachm.
——— Orange Peel, 1 drm.
Solution of Arsenic, four drops to eight.
Mix them. This draught may be taken three times a day.

P. 25.—Take Mixture of the Infusion of Cascarilla (P. 10), one ounce and a half.
Wine of Iron, one drachm and a half.
Mix them as a draught to be taken twice or thrice daily.

P. 26.—Take Peruvian Bark in Powder, one ounce.
Gentian Root in Powder, two drms.
Subcarbonate of Iron, two drms.
Syrup of Orange Peel, a sufficiency to form an Electuary, of which the bulk of a nutmeg may be taken morning, noon, and night.

P. 27.—Take Sulphate of Quinine, three to five grains.
Infusion of Quassia, ten drachms.
Tincture of Bark, two drachms.
Mix them, and let this draught be taken three or four times a day.

P. 28.—Dissolve Nitrate of Silver, 4 grs. in a few drops of
Distilled Water, then add
Crumb of Bread, a sufficiency to
Form a mass, and divide this into 24 Pills, of which one may be taken thrice a day, gradually increasing the dose to two pills.

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